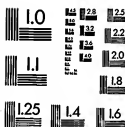




MICROCOPY RESOLUTION TEST CHART
(ANSI and ISO TEST CHART No. 2)



Thomas A Edison Papers

A SELECTIVE MICROFILM EDITION

*PART IV
(1899-1910)*

Thomas E. Jeffrey
Lisa Gitelman
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David W. Hutchings
Leslie Fields

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Thomas A. Edison Papers
at
Rutgers, The State University
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18 June 1981

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**Edison Portland Cement Company Records
General Ledger (1910-1912)**

This ledger covers the period January 1910-December 1912. As the account book of final entry, it summarizes transactions relating to the cement works at Stewartsville and other company facilities. Included are accounts receivable and payable; stock and bond accounts; payroll and advertising accounts; profit and loss statements; and accounts pertaining to sales, including the sale of fertilizer. A few accounts deal with paper and duck bags used for the shipment of cement. Some entries relate to poultry farming at Stewartsville. Others pertain to company sales offices in Boston, Newark, New York City, Philadelphia, Pittsburgh, and Savannah. There are also warehouse accounts for facilities in New Jersey, New York, and several southern states, including Florida, Georgia, North Carolina, and South Carolina. In addition, there are accounts with Edison and various Edison companies, including the Edison Crushing Roll Co. and the Edison Manufacturing Co. The spine is labeled "2 Genl Ledger," "1910 1912," and "Portland Cement." The book contains 324 numbered pages and an index; some pages are blank.

[REDUCTION RATIO = 16:1]

Accounts Receivable	0.
Accounts Payable	100.
Amalg Bond Int.	130.
Amalg Bond & Div.	135.
Advertising	207.
Accounts Payable Ledger "A"	115.
Do	"B" 117.
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Bond Discount	135.
Bisler, Ed. L., Cashier	135.
Bills Receivable	59.
Bag Expense	83.
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Bonus to Employees	126.
Boston (Zulu) Office	221.
Bond Int.	241.
Bulmer, Capt., Recd. F.	260.
Blank Claims Current	514.
Blank Bags	315.
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A
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W
X
Y
Z

Capital Stock Common

1916 Dec	31	Ledger #3	1 12000.00 00	Jan 1	Led #1	1 12000.00 00
1916 Dec	31	Ledger #3	1 12100.00 00	Jan 1	Led #1	1 12100.00 00

Profit Loss

Jan. 1	1	LB #	100	67438000	Jan. 30	100	67438000	100	67438000
Dec. 31	1	Journal	100	10000000	Dec. 31	100	10000000	100	10000000
Jan. 1	1	Journal	100	87407663	Jan. 30	100	87407663	100	87407663
Dec. 31	1	Journal	100	82224371	Dec. 31	100	82224371	100	82224371
Jan. 1	1	Journal	100	10000000	Jan. 30	100	10000000	100	10000000
Dec. 31	1	Journal	100	10000000	Dec. 31	100	10000000	100	10000000
Jan. 1	1	Journal	100	10000000	Jan. 30	100	10000000	100	10000000
Dec. 31	1	Journal	100	10000000	Dec. 31	100	10000000	100	10000000
Jan. 1	1	Journal	100	10000000	Jan. 30	100	10000000	100	10000000
Dec. 31	1	Journal	100	10000000	Dec. 31	100	10000000	100	10000000

Patents & Trademarks

Jan/	Feb #1	5 1000000000	Dec/31	Ledger #3	3 1000000000
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Dr. W. D. L. Sales Office

1910																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Real Estate, Plant & Livestock

1910			
Jan.	1	Led. #1	9.481874656
Aug.	7	Land	150.00
May	31	Wicks	53.431158
May	10	Wicks (from the field)	203.00
Sept.	26	Wicks (from the field)	250.00
		Wicks (from the field)	30.00
		Wicks (from the field)	49.00
		Wicks (from the field)	1.00
Sept.	30	Wicks (from the field)	120.00
Sept.	13	Wicks (from the field)	50.00
Sept.	18	Wicks (from the field)	53.00
Sept.	19	Wicks (from the field)	60.00
Dec.	31	Wicks	178.00
			488.1874656

1910			
Oct.	31	Wicks (from the field)	12.00
Dec.	31	Wicks (from the field)	5.00
			488.1874656

488.1874656

Bond Discount

1914	1912
Jan. 1, Led. #1	Dec. 31, Ledger #3
16 3150000	8 3150000

1914

Jan.

1

Led. #1

24. 24958097

25. 22. 153142

26. 9. 18811516

27. 53. 22577229

28. 111. 153142

29. 20. 2660779

30. 59. 1150

31. 60. 3708872

32. 39. 9101149

33. 67. 4625553

34. 73. 3523

35. 75. 4611322

36. 59. 9471809

37. 81. 25324876

38. 82. 11037853

39. 140. 1527227

40. 73. 9200969

41. 90. 4931232

42. 192. 70

43. 88383

44. 107. 24794

45. 71. 42

46. 89. 869662

47. 78. 4852277

48. 167. 17132471

49. 103. 93264599

50. 102. 1142262

51. 119. 9665438

52. 116. 9198928

53. 177. 11249251

54. 103. 15562657

55. 110. 11816186

56. 149. 15214458

Work Account

1914

Jan.

7

J. P. Smith

45. 120

51. Bond Credit

301. 222853

53. 301. 150

54. 188282

55. 151635

56. 737916

57. 3069529

58. 5255922

59. 2432653

60. 522007

61. 422502

62. 18127437

63. 4939

64. 1795

65. 3622024

66. 876149

67. 778506

68. 3133076

69. 87814424

70. 52000

71. 3077615

72. 521136

73. 8721326

74. 220417

75. 7888287

76. 2572

77. 19000

78. 197054

79. 15693806

80. 91140

81. 4704

82. 3652294265

83. 7220275

84. 117167798

85. 120. 69465

86. 52504

87. 36727628

88. 125. 2181018

89. 126. 22973725

90. 30077

91. 7526

92. 111. 11791

93. 28445

94. 269. 1275432

95. 7230247

96. 1275432

97. 1275432

98. 1275432

99. 1275432

100. 1275432

Works ap

1911	Jan 24 Balance	27225284	1911	Jan 29 Merchants Store Co	47	84461
	30 Voucher	340	4657443	30 Journal	48	544455
	Journal Cap. P. 47	3745911		" " Merchants		74350
		5252		" " "	49	711751
Dec. 21 L.P. Miller & Son	57	3591247		" " "		4025327
30 Voucher	346	3628036	Dec 19 L.P. Miller & Son	56	9092	
Cap. P. 63	968497		L.P. Miller & Son		45	
Journal	64	105273	27 L.P. Miller & Son	57	2251	
			30 Merchants	62	416628	
			" Merchants	63	41595	
			" "		3707556	
			" "		2284518	
			" Cash Sales		2367708	
			" Merchants		26203534	
					40575953	
Jan 1 Balance		40575953	Jan 10 Merchants Store Co	47	9334	
15 L.P. Miller & Son	70	5111	13 Merchants	48	3088	
31 Voucher	351	803146	29 Merchants	71	44523	
Journal Cap. P. 73		845803	31 Journal	73	1198281	
Feb 9 L.P. Miller & Son	77	11676			305880	
29 Voucher	357	264931			1034002	
Journal Cap. P. 62		267447	Feb 5 L.P. Miller & Son	75	14775	
25 Merchants	91	54	10 Merchants	78	6941	
30 Voucher	369	5405905	17 Merchants		6253	
Journal Cap. P. 92		5325402	29 Journal	82	147480	
Apr. 10 L.P. Miller & Son	105	36636		83	51166	
30 Merchants	101	200			1912483	
Voucher	385	6264036	Jan 30 Merchants	92	53540	
Journal		4447240	" "		3294180	
May 10 L.P. Miller & Son	129	144461	" "	93	2255514	
31 Voucher	105	7152500	" Cash Sales	93	4174716	
Journal Cap. P. 114		4785383	Journal		4161823	
June 10 L.P. Miller & Son	10	84168	" "	102	1301	
30 Voucher	131	7328948	" "		1410699	
30 Journal Cap. P. 115		4660075	" "		1034620	
" L.P. Miller & Son		711680	" "	103	8263995	
July 10 L.P. Miller & Son	34	2991	31 Merchants	113	1426	
23 L.P. Miller & Son	136	7993	Journal	114	8937	
			" "	115	1822742	
			" "		1797743	
			" "	116	8323592	
			" "		46439	
			" "	29 Merchants	346	
			Journal	148	69244	
			" "	146	1979431	
			" "		1264036	
			" "		8063430	
			" "		11323	
			" "		40575953	

Works ap

July	23	Balance	24422130	July	23	L. P. Miller & Son	136	1787	
	31	Voucher	438	8394030		" L. P. Miller & Son		9594	
		" Merchants	139	4702774		29 Merchants	138	102268	
		" " "		27645		31 Journal	139	117848	
Aug.	1	Merchants	141	17714		" Merchants		3900317	
	11	Merchants	145	3104423		" Cash Sales	140	1068795	
	31	Voucher	436	9790001		7 Merchants	141	2219541	
		Journal Cap. P.	150	5114987	Aug.	7	Merchants	142	132791
Sept	1	Merchants	154	326446		26 Merchants	143	8759	
	30	Voucher	474	9891550		27 Merchants		123	
		" Merchants	161	4562806		31 Journal	144	1697717	
	31	Voucher	490	8798797		" Merchants	150	134328	
		" Merchants	172	5116397		" Merchants		398577	
Oct						" Cash Sales		1896890	
	30	Voucher	508	8078324		1 Merchants	153	3794	
		" Merchants	173	4195748		17 Merchants	156	3568	
	30	Voucher	513	4078324		30 Journal	161	1461180	
		" Merchants	187	860		" Merchants	161	177214	
Dec.	9	Merchants	191	3750		" Merchants	162	563846	
	31	Voucher	524	6790760		" Cash Sales		1045599	
		" Merchants	197	76086		31 Merchants	171	3278	
		" Merchants		4045717		Journal	172	2750816	
						" "		156039	
						" "		1717965	
						" Cash Sales	173	1148177	
						13 Merchants	176	5430	
						" Merchants	177	12513	
						2 Merchants	179	3557	
						" Merchants	180	3529	
						30 Merchants	181	1890	
						Journal		7761592	
						" Cash Sales	183	986773	
						" Merchants		166471	
						Journal		67457	
						" Merchants		90138	
						Journal	184	167766	
						9 Merchants	185	56850	
						10 Merchants		8509	
						19 Merchants	189	9316	
						" Merchants		5938	
						" Merchants		5468	
						23 Merchants	192	3538	
						31 Journal	193	719310	
						" Cash Sales		1197777	
						" Merchants		11776	
						" Merchants		1237	
						Balance	18	1514	

Works acct.

Dec. 31	Balance	17	14990993	Dec. 31	Journal	198	14990993
					" Geo. & Co	"	159914
					" The Portland	"	787763
					" Gardner	"	15990993
					" Lumber Co	199	15990993
					31 Ledger	9	14990993
			14990993				

Ed. L. Bisher, Cashier

1910		1910		1910		1910		1910	
Jan.	1	Let. #1	47.	8076	Jan. 31	22557	1 v	4471.12	
	12	Let.	97.	9471	"	22569	2 v	7851.77	
	21	"	97.	4426	Feb. 28	22984	103	381.73	
th	1	"	102.	7851	"	22985	11 v	1851.24	
Aug	1	"	114.	4426	Mar. 31	23122	215	461.33	
	1	"	115.	4426	"	23115	734	663.83	
	14	"	117.	4426	Apr. 30	23343	409	850.10	
	18	"	117.	4426	"	23354	445	605.92	
Apr	6	"	121.	4426	"	Journal	821	323.87	
	28	"	121.	4426	May 31	23875	592	442.95	
Aug	5	"	125.	4426	"	23890	601	570.86	
	6	"	125.	4426	"	Journal	801	104.72	
	28	"	140.	4426	June 30	23974	7610	644.48	
June	4	"	149.	4426	"	23986	772	844.91	
	7	"	150.	4426	"	Journal	894	1525.83	
	28	"	156.	4426	July 31	23973	901	449.10	
July	7	"	156.	4426	"	23984	911	664.69	
	15	"	175.	4426	"	Journal	1081	288.88	
Aug	6	"	175.	4426	Aug. 31	24177	1057	308.41	
	1	"	175.	4426	"	24201	1071	287.52	
	1	"	177.	4426	"	Journal	1171	445.64	
	24	"	177.	4426	Sept. 30	24293	1201	465.84	
Sept	7	"	179.	4426	"	24408	1230	463.84	
	21	"	190.	4426	"	Journal	1250	381.24	
Oct	5	"	202.	4426	Oct. 31	24587	1285	1227.74	
	7	"	204.	4426	"	24609	1291	943.42	
	19	"	207.	4426	"	Journal	1301	444.38	
	21	"	211.	4426	"	24607	1321	244.73	
Nov	7	"	211.	4426	"	Journal	1451	332.65	
	21	"	211.	4426	Dec. 31	24998	1451	1442.04	
	21	"	211.	4426	"	25021	1651	1240.31	
Dec	1	"	211.	4426	"	25021	1671	543.28	
	21	"	211.	4426	"	Journal	1541	180.78	
1911	21	"	211.	4426	Jan. 31	25200	1711	369.09	
Jan.	9	Cash	26.	150.21	31	25214	1721	101.15	
	10	30556	27.	340.28	"	25374	1731	574.06	
	20	30755	27.	340.28	"	25391	1741	250.27	
Feb	6	30901	28.	340.28	31	25547	2051	274.07	
	6	31104	28.	340.28	"	25570	2071	435.47	
	6	31218	40.	340.28	Mar. 31	25750	2211	101.23	
Mar.	6	31509	40.	340.28	"	25769	2231	304.04	
	11	31818	40.	340.28	Apr. 30	25762	2381	172.76	
Apr.	11	31943	40.	340.28	"	25781	2401	336.25	
	17	32004	40.	340.28	May 31	25781	2401	336.25	
	22	32075	40.	340.28	June 30	25781	2401	336.25	
May	5	32270	40.	340.28	"	25781	2401	336.25	
June	10	32472	40.	340.28	"	25781	2401	336.25	

Duck Bay Purchases

Jan	1	Left	423.855	51.	787.8813	June 30	Salad	2.50107		
Mar	31		170.019	48.	2.378.99	"	Butt	537.255	420.2033	
Apr	30		145.000	87.	24.2758	"			411.8515	
May	31		186.000	92.	18.52258					
June	30		145.899	98.	64.82258					
"		Retn.	140.2913							
			244.5455		54.66578			244.5455	54.66578	
July	1	Bank	537.258		43.52033	June 30	Salad	2.491200		
	31		178.024	108.	67.67889	"	Butt	10.751		
Aug	31		196.000	116.	63.88399	"	Journal	58.000	24.52100	
Sept.	30		165.438	156.	59.27768				156.	26.790.99
"		Retn.	326.1202							
			889.020		91.61789			889.020	91.61789	
Jan.	1		885.020		54.82690	June 30	Salad	2.669.670		
Feb.	28		24.000		5.172.000	"	Butt	2.357		
Mar.	31		200	188.	52.1885	"	Journal	410.802	38.998.69	
Apr.	30		51.540	199.	50.21140				224.	65.998.48
May	31		415.837	212.	40.04921					
June	30		70.000	222.	25.44157					
"		Retn.	108.899							
			198.286							
			807.232		10.497.717			807.232	10.497.717	
July	1	Bank	410.302		33.978.69	Dec. 30	Salad	2.630.244		0.00
	31		150.000	253.	14.700.00	"	Butt	10.805		0.00
Aug.	31		70.000	11.	63.600.00	"	Salad	94.137	65.	44.633.01.
Sept.	30		290.899	63.	28.508.19					
	30	Journal	461	504.	0.00					
	30	nd.	2,754.501		0.00					
	30	Retn.	65		558.622					
			3,627.206		9,463.301			3,627.206	9,463.301	
Jan.	1	Int.	94.137		9,463.301	June 30	Salad	35.040	125.	34.339.2
June	30		36.141	126.	93.4427	Dec. 31	Salad	6367.787	50.	0.00
July	31		22.6045	139.	17.64824	"	Butt	44.000		0.00
Aug.	31		69.580	150.	1.625.764	"	Salad	77.600	100.	73.7333
Sept.	30		189.663	162.	1,748.377	"	Butt	10.200		135.162.66
Oct.	31		86.126	172.	78.82404					
Nov.	30		11.2342	184.	1.678.289					
Dec.	31	Retn.	340.125	35.	1.678.289					
		"	4,441.887	78.	0.00					
		"	28.461	78.	0.00					
		Retn.	111.455	193.	12.313.304					
			6526.491		14894.6761			6526.491	14894.6761	

Duck Boat Returned 12/24/61

Jan	31	722 90	6	18 76 90	Oct 28	360 44	336	375 28
Feb	28	205 55	15	22 77	Nov 31	3387		285 80
Mar	31	761 89	15	21 42 77 49	Nov 30	"	11 15 336	7 27 28
Apr	30	751 07	70	65 88 93	"	"	170 38 100	12 7 10 93
May	31	247 96	31	18 66 70				
June	30	8150 44	29	70 62 830				
	30	200 24	49	32 63 22 69				
	30	141 23 89		13 21 11 05				
July	31	267 700	58	27 58 71	July 31			
Aug	31	422 207	67	92 62 58	Aug 31	1976	337	100 394
Sept	30	485 167	80	83 55 97	Sept 30	609		10 47 82
Oct	31	460 706	92	34 68 88	Oct 31	49		11 14 83
	"	enrolled		21 10 38 6	Nov 30	190		11 14 83
Nov	30	496 101	103	82 61 58 3	Nov 30	206 47 1	192	19 2 50 135
Dec	31	378 930	112	28 8 43 9				
	"	enrolled		21 1 33 2 115				
				24 20 50 8 6				
Jan	31	394 968	123	29 77 240	Jan 31	357 838		1 9 26 6 206
Feb	28	321 199	152	24 08 8 62	Jan 31	1399 886	224	10 4 99 1 45
Mar	31	215 989	141	100 49 46				
Apr	30	116 850	147	81 66 73				
May	31	193 216	156	144 9 120				
June	15	101	217	87 4 12				
	19	158	246	11 55				
	30	157 803	167	118 35 523				
		1387 976		1000 0 142				
July	31	914 90	177	68 61 175	Jul 30	487 45	64	36 55 87
Aug	31	124 929	10	83 66 108	30 ProL	461 804	65	34 61 75 4
Sept	30	86 571	21	64 92 88				
Oct	31	116 959	35	37 47 192				
	"	enrolled		02				
Nov	30	378 57	47	26 39 225				
Dec	30	814 443	54	60 53 224				
		610 249		37 26 747				
Jan	30	307 22	65	23 04 15	Jan 31	510 249		35 76 87 1
Feb	19	2849	50	21 367		340 195	200	75 50 7 61
	29	29631	74	222 383				
Mar	27	100	90	750				
	30	552 285	80	41 20 60				
Apr	30	12875	85	71 83 8				
May	31	14469	92	105 77 8				
June	30	44616	100	33 44 8				
July	31	14623	110	10 16 73				
Aug	31	37064	123	17 24 50				
Sept	30	31500	134	35 87 50				
Oct	31	6676	149	50 0 70				
Nov	30	6497	161	45 0 37				
Dec	31	4880	173	16 27 81				
		310 153		25 50 91				
				340 188				2550 96

Poultry Exp.

1911		1912	
Nov.	30	Dec.	31
Dec.	31	Ledger #3.	140
			56721
			56721

Koske

184

34559

Dec.

31

Ledger #3.

140

56721

185

22132

Dec.

31

Ledger #3.

140

56721

56721

56721

Stock Bag Sales

1904
Dec. 31. *P.L.* 6367787 300. 6367787 70
 6367787 6367787
 6367787 6367787

1905
 7802994 v. 7802990 70
 7079974 33. 7079974 40
 701179 65. 701179 50
 7440 54 96. 7440 54 40
 6777 1173. 6777 1170
 7802994 45 7802994 50
 6367787 6367787

Bills Receivable

Set	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Set	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Mar	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Apr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
June	1	2	3	4	5	6																																																																																														

Bills Receivable.

2	July	18	P. B. Green	107.	100.00
3		19	Good M. etc. Co.	108.	2156.43
4		20	Smith's B. & C.	110.	300.00
5		15	John P. Direct	227.	16443.88
6		27	Clark & Williams	111.	208.27
7		2	P. B. Green	"	100.00
8		24	C. W. Cook	112.	322.22
9	Aug	12	John P. Direct	"	17033.96
10		11	Bank	2.	309.42
11		"	"	"	585.67
12		19	"	11.	750.00
13		27	"	12.	585.81
14		"	"	"	50.00
15		"	"	"	176.28
16		73	"	"	50.00
17		30	"	14.	16.119
18		26	"	16.	100.00
19		"	"	"	324.37
20	Sept	2	"	18.	127.09
21		8	"	20.	300.00
22		15	"	22.	145.00
23		13	"	"	50.00
24		14	"	25.	100.00
25		16	"	"	157.50
26		7	John P. Direct 304	14.	1312.78
27		5	" " 5142	15.	10558.19
28		29	Bank	32.	2438.25
29	Oct	20	John P. Direct 3268	31.	17458.07
30		14	Bank	38.	182.23
31		17.	"	39.	8.516
32	Nov	6	John P. Direct 3259	41.	12004.77
33		4	Bank	47.	100.00
34		12	"	49.	331.80
35		20	"	55.	96.20
36		22	"	"	100.00
37		28	"	56.	55.83
38		24	John P. Direct 3071	47.	250.71
39		5	Bank	57.	117.49
40		"	"	"	160.87
41		1	John P. Direct 3379	51.	6750.47
42		18	" " 3436	55.	250.71
43		20	Reinsurance	55.	12.80
44					164350.74

Bills Receivable

Jan	1	Balance	12	2804.42	Jan 13	Cash	77	1455.31
Feb	31	Rec'd Cash	16	3782.58	14	"	78	84.22
Mar	29	"	16	4135.54	15	"	79	2360.04
Apr	30	"	17	5370.46	16	"	80	400.00
May	31	"	18	7768.64	17	"	81	2000.00
June	30	"	19	12781.06	17	Notes Rec'd 3505	82	10525.31
July	29	"	20	4781.95	28	Cash	83	247.91
Aug	31	"	23	11821.06	29	"	84	140.00
			24	2612.44	30	"	85	2500.04
			25	3732.58	31	"	86	144.38
					32	"	87	8000.00
					33	"	88	750.40
					34	Notes Rec'd 3588.75	89	6558.19
					35	"	90	3576.78
					36	Cash	91	18729.91
					37	"	92	2699.8
					38	"	93	2000.00
					39	"	94	245.22
					40	"	95	400.00
					41	"	96	2547.83
					42	"	97	4000.00
					43	Notes Rec'd 3505	98	4873.24
					44	Cash	99	150.00
					45	Notes Rec'd 3588.75	100	2654.51
					46	"	101	3751.20
					47	Cash	102	346.00
					48	"	103	4384.88
					49	"	104	3500.00
					50	"	105	103.21
					51	"	106	164.29
					52	"	107	148.22
					53	Notes Rec'd 3505	108	172640.4
					54	Cash	109	124.58
					55	"	110	4000.00
					56	"	111	481.31
					57	"	112	2040.00
					58	Notes Rec'd 3505	113	10137.13
					59	"	114	7357.54
					60	"	115	6030.62
					61	"	116	7816.00
					62	Cash	117	1617.00
					63	"	118	4086.00
					64	"	119	150.52
					65	"	120	276.04
					66	Notes Rec'd 4401.145	121	83.76
					67	Cash	122	110.32
					68	"	123	107.79
					69	"	124	240.19
					70	"	125	195.17
					71	Balance	126	26.23

1168546.98

Bills Receivable

Sept	Balance	12	767.32	Sept	Cash	60	3500.00
30	Rev. 35.58	27	69248.19	23	"	61	87.49
Oct	31	"	30724.83	24	"	62	507.50
Nov	30	"	1951.07	25	"	63	500.00
Dec	31	"	43534.65	26	"	64	1527.00
				27	"	65	1482.47
				28	"	66	4021.42
				29	"	67	84.31
				30	"	68	1526.22
				31	"	69	5119.03
				32	"	70	6473.62
				33	"	71	7694.55
				34	"	72	4000.00
				35	"	73	2788.16
				36	"	74	100.00
				37	"	75	1323.35
				38	"	76	500.00
				39	"	77	695.99
				40	"	78	31.33
				41	"	79	2351.67
				42	"	80	1168.26.34

Such Bar Return 10/1/10

Year	Month	Day	Time	Rate	Amount	Balance
1900	Jan	1	10:00	1.00	1.00	1.00
1900	Jan	2	10:00	1.00	2.00	2.00
1900	Jan	3	10:00	1.00	3.00	3.00
1900	Jan	4	10:00	1.00	4.00	4.00
1900	Jan	5	10:00	1.00	5.00	5.00
1900	Jan	6	10:00	1.00	6.00	6.00
1900	Jan	7	10:00	1.00	7.00	7.00
1900	Jan	8	10:00	1.00	8.00	8.00
1900	Jan	9	10:00	1.00	9.00	9.00
1900	Jan	10	10:00	1.00	10.00	10.00
1900	Jan	11	10:00	1.00	11.00	11.00
1900	Jan	12	10:00	1.00	12.00	12.00
1900	Jan	13	10:00	1.00	13.00	13.00
1900	Jan	14	10:00	1.00	14.00	14.00
1900	Jan	15	10:00	1.00	15.00	15.00
1900	Jan	16	10:00	1.00	16.00	16.00
1900	Jan	17	10:00	1.00	17.00	17.00
1900	Jan	18	10:00	1.00	18.00	18.00
1900	Jan	19	10:00	1.00	19.00	19.00
1900	Jan	20	10:00	1.00	20.00	20.00
1900	Jan	21	10:00	1.00	21.00	21.00
1900	Jan	22	10:00	1.00	22.00	22.00
1900	Jan	23	10:00	1.00	23.00	23.00
1900	Jan	24	10:00	1.00	24.00	24.00
1900	Jan	25	10:00	1.00	25.00	25.00
1900	Jan	26	10:00	1.00	26.00	26.00
1900	Jan	27	10:00	1.00	27.00	27.00
1900	Jan	28	10:00	1.00	28.00	28.00
1900	Jan	29	10:00	1.00	29.00	29.00
1900	Jan	30	10:00	1.00	30.00	30.00
1900	Jan	31	10:00	1.00	31.00	31.00
1900	Jan	32	10:00	1.00	32.00	32.00
1900	Jan	33	10:00	1.00	33.00	33.00
1900	Jan	34	10:00	1.00	34.00	34.00
1900	Jan	35	10:00	1.00	35.00	35.00
1900	Jan	36	10:00	1.00	36.00	36.00
1900	Jan	37	10:00	1.00	37.00	37.00
1900	Jan	38	10:00	1.00	38.00	38.00
1900	Jan	39	10:00	1.00	39.00	39.00
1900	Jan	40	10:00	1.00	40.00	40.00
1900	Jan	41	10:00	1.00	41.00	41.00
1900	Jan	42	10:00	1.00	42.00	42.00
1900	Jan	43	10:00	1.00	43.00	43.00
1900	Jan	44	10:00	1.00	44.00	44.00
1900	Jan	45	10:00	1.00	45.00	45.00
1900	Jan	46	10:00	1.00	46.00	46.00
1900	Jan	47	10:00	1.00	47.00	47.00
1900	Jan	48	10:00	1.00	48.00	48.00
1900	Jan	49	10:00	1.00	49.00	49.00
1900	Jan	50	10:00	1.00	50.00	50.00
1900	Jan	51	10:00	1.00	51.00	51.00
1900	Jan	52	10:00	1.00	52.00	52.00
1900	Jan	53	10:00	1.00	53.00	53.00
1900	Jan	54	10:00	1.00	54.00	54.00

Druck Bagger Petrol 50

1912					
Feb 29	1772	74	8860	Dec 31	28461 300
Mar 30	2459	50	12665		142305
Apr 30	958	85	4790		
May 31	1820	92	36100		
June 30	759	100	2195		
July 31	4502	110	22310		
Aug 31	4290	123	71450		
Sept 30	2413	134	47685		
Oct 31	2194	149	19879		
Nov 30	4396	161	24289		
Dec 31	2868	173	14340		
	<u>28461</u>		<u>142305</u>		
				<u>28461</u>	<u>142305</u>

Paper Bags

1910				1911			
Jan	1	646378	81.	Jan	31	76520	170.
Mar	31	150000	68	Mar	31	46292	177.
Apr	30	781884	84.	Apr	30	154288	107.
May	31	123874	72.	May	31	185806	217.
June	30	127896	77.	June	30	181299	239.
				July	30	114681	159.
				Aug	31	76885	111.
				Sept	30	71627	
				Oct	31	76599	291566
				Nov	30	100115	250.
				Dec	31	408926	
				Jan	31	585992	
				Feb	28	472867	
				Mar	31	185645	77.
				Apr	30	77249	74.
				May	31	132443	102.
				June	30	121164	
				July	31	441155	
				Aug	31	586791	2873247
				Sept	30	51184	112.
				Oct	28	44461	121.
				Nov	30	81687	110.
				Dec	31	71149	162.
				Jan	31	97722	197.
				Feb	28	200	218.
				Mar	31	827849	208.
				Apr	30	179314	224.
				May	31	28219	
				June	30	591370	1393305
				July	31	20289	50
				Aug	31	53249	127.
				Sept	30	100	7.
				Oct	31	82437	26.
				Nov	30	68961	49.
				Dec	31	62409	67.
				Jan	31	100	39.
				Feb	28	41554	55.
				Mar	31	22985	96.
				Apr	30	181300	65.
				May	31	25450	
				June	30	636365	12766038
				July	31	7212	103.
				Aug	31	14432	111.
				Sept	30	48104	127.
				Oct	31	51032	156.
				Nov	30	115324	185.
				Dec	31	68526	217.
				Jan	31	79635	248.
				Feb	28	121318	
				Mar	31	428987	

Paper Bags.

1912		1913		1914		1915	
July	31	507 682	77	13697 05	July 31	416 265	77
Aug	31	125778	150	31444 43	Aug 15	200	143
Sept	30	127525	162	31888 83	31	84453	33
Oct	31	136334	177	318575	Sept 11	80	163
					30	89414	65
					Oct. 27	89414	65
					31	71205	76
					Nov. 30	72689	173
					Dec. 31	38276	145
					" Tuesday	157 000	200
					" Sept	76127	✓
					" Oct	700	✓
						577337	2318348
						957239	2318348

Deane's Model Discrepancy

1914				1915			
Jan.	31	Banks Bros.	273	1500.00	Dec. 5	# 535	147
Feb.	28	"	226	84.83	31	Journal	156
Mar.	31	"	226	43.47			1788108
Apr.	30	"	229	25.66			
May	31	"	204	31.89			
June	30	"	157	138.58			
July	31	"	239	49.22			
Aug.	31	"	211	108.12			
Sept.	30	"	243	102.47			
Oct.	31	"	226	117.12			
Nov.	30	"	245	103.78			
Dec.	31	"	246	148.22			
				1978.12			1988130
Jan.	17	Stanford MS Co	161	750	July 31	Balance	416501
	24	James W. Denney	165	1815			
	30	W. H. Payne & Son	166	750			
	31	Eastland & Co	"	750			
	"	Sundry Credits	247	432.15			
Feb.	6	Geo. G. Pitts	171	675			
	21	Sundry Credits	174	3345			
	3	G. H. Williams	171	2655			
	28	Sundry Credits	247	44654			
Mar.	3	B. D. Lawrence	179	660			
	13	Wm. L. L. & Co	181	530			
	14	L. H. L. L. & Co	182	27000			
	21	W. S. G. & Co	183	850			
	27	E. J. Shonell	184	41102			
	"	J. J. H. L. & Co	185	660			
	31	Easton Clayford	186	10325			
	"	Denney Co.	248	22875			
Apr.	30	"	"	875			
May	2	W. S. G. & Co	200	850			
	5	Easton Clayford	202	875			
	10	Michael R. Denney	203	7650			
	12	Denney & Denney	204	100			
	18	Denney & Co	205	5350			
	23	Easton Clayford	207	4500			
	31	Denney & Co	248	855			
June	12	Easton & Denney	216	13000			
	15	Easton Clayford	217	750			
	"	J. J. Shonell	"	675			
	19	Easton Clayford	218	4250			
	30	Denney & Co	248	1635			
July	15	L. H. L. & Co	226	750			
	17	Easton & Denney	228	32300			
	25	Denney & Co	230	147985			
	31	Easton & Denney	249	1660			
				1116501			1116501

Debit Mtd Acct

Aug 1 Balance		116501	Dec 30 Journal	65	65329.4
5	June Cr.	55632			
5	Good Vapors	400			
8	June Cr.	7590			
16	W.D. & Co.	10425			
18	Smith & Co.	1000			
23	May Island	675			
Sept 13	Quincy & Co.	15050			
22	Quincy & Co.	17500			
"	John Fisher	750			
25	Ballou & Taylor	675			
"	Boley & Co.	549			
Oct 6	Quincy & Co.	25450			
11	E. B. & Co.	12150			
13	Quincy & Co.	3600			
20	W.D. & Co.	7460			
24	W.D. & Co.	51			
Nov 10	Quincy & Co.	57400			
"	E. B. & Co.	2000			
Dec 4	Quincy & Co.	675			
11	Quincy & Co.	11050			
21	Quincy & Co.	2661			
		65329.4			
Jan 10	Quincy & Co.	6500	Dec 31 Journal	700	45329.4
Feb 10	Do	5100			296125
Mar 6	Do	12200			
Apr 10	Do	5300			
30	W.D. & Co.	9150			
May 10	Quincy & Co.	16550			
June 7	W.D. & Co.	17225			
8	Quincy & Co.	26250			
13	Do	132			
Apr 17	Do	14882			
Sept 17	Do	24850			
Oct 17	Do	44850			
Nov 13	Do	14850			
Dec 9	Do	27699			
11	Do	45049			
		246125			

296125

Bag Expense

Jan	1	Ref #1	93	50051	189	1	1	47	14
Feb	1	Quincy	96	505	189	1	1	47	14
Mar	1	Quincy Credits	306	50389	189	15	Quincy & Co.	74	60
	17	Quincy & Co.	64	1970	189	15	Quincy & Co.	74	60
	19	Quincy Credits	"	1970	189	15	Quincy & Co.	74	60
	31	Quincy Credits	70	2791	189	15	Quincy & Co.	74	60
	"	"	306	50389	189	15	Quincy & Co.	74	60
	"	"	68	39282	189	15	Quincy & Co.	74	60
Apr	5	G. C. & Co.	71	39282	189	15	Quincy & Co.	74	60
	20	Quincy Credits	31	11524	189	15	Quincy & Co.	74	60
	"	"	81	11524	189	15	Quincy & Co.	74	60
May	31	Quincy Credits	39	11524	189	15	Quincy & Co.	74	60
	"	"	92	17252	189	15	Quincy & Co.	74	60
June	30	Quincy Credits	40	65925	189	15	Quincy & Co.	74	60
	"	"	99	11524	189	15	Quincy & Co.	74	60
				63882	189	15	Quincy & Co.	74	60
July	1	Quincy & Co.	100	43874	189	15	Quincy & Co.	74	60
	31	Quincy Credits	307	69	189	15	Quincy & Co.	74	60
	"	"	53	43874	189	15	Quincy & Co.	74	60
Aug	31	Quincy & Co.	108	14248	189	15	Quincy & Co.	74	60
	"	"	69	65925	189	15	Quincy & Co.	74	60
Sept	30	Quincy & Co.	116	67984	189	15	Quincy & Co.	74	60
	"	"	80	31624	189	15	Quincy & Co.	74	60
	"	"	178	24248	189	15	Quincy & Co.	74	60
Oct	5	Quincy & Co.	125	367	189	15	Quincy & Co.	74	60
	"	"	92	67984	189	15	Quincy & Co.	74	60
	12	Quincy & Co.	104	67984	189	15	Quincy & Co.	74	60
	31	Quincy Credits	92	67984	189	15	Quincy & Co.	74	60
Nov	30	Quincy	141	4681	189	15	Quincy & Co.	74	60
	"	"	103	25516	189	15	Quincy & Co.	74	60
	"	"	145	65925	189	15	Quincy & Co.	74	60
Dec	7	"	113	1947	189	15	Quincy & Co.	74	60
	31	"	154	41025	189	15	Quincy & Co.	74	60
				1077271	189	15	Quincy & Co.	74	60
Jan	1	Quincy	161	63260	189	15	Quincy & Co.	74	60
	5	Quincy & Co.	123	6000	189	15	Quincy & Co.	74	60
	31	Quincy Credits	169	2882	189	15	Quincy & Co.	74	60
Feb	21	W.D. & Co.	174	822	189	15	Quincy & Co.	74	60
	28	Quincy	132	1752	189	15	Quincy & Co.	74	60
	"	"	176	11524	189	15	Quincy & Co.	74	60
Mar	11	Quincy & Co.	182	367	189	15	Quincy & Co.	74	60
	31	Quincy & Co.	186	1750	189	15	Quincy & Co.	74	60
	"	"	141	2708	189	15	Quincy & Co.	74	60
	"	"	188	75047	189	15	Quincy & Co.	74	60
Apr	11	W.D. & Co.	192	75047	189	15	Quincy & Co.	74	60

1886157

Bag Expense

1911	June 28	June 28	June 28	June 28
15: Balance	47816.39	June 28	June 28	June 28
20: Harrison & Co. 195.	45800	50: To Cash	327.	1440.
30: Smith Co. 147.	16713	50: To Cash	221.	475
" " 199	16807	" " "	"	2774.00
" " 199	16807	" " "	"	927.99
May 5: Royal Bank Co. 201.	14635			
23: National Cash Co. 207.	2210			
" " 208	100			
31: Smith Co. 156.	22374			
" " 212	154955			
June 8: Leister & Sons 214.	500			
" " 60	60			
10: Royal Bank Co. 215	5170			
30: National Cash Co. 221	420			
" " 187	2574			
" " 222	15713			
	466175			
July 1: Cash	57770	June 8: National Cash Co. 5.	22725.	
17: Royal Bank Co. 228	2378	18: Adams & Co. 6.	50.	
31: Smith Co. 177	3951	24: National Cash Co. 8.	21883.	
" " 235	185056	31: Smith Co. 290.	2248.	
Aug 16: Cash	6.	Sept 18: National Cash Co. 15.	25214.	
18: Adams & Co. 7.	30	27: National Cash Co. 18.	1444.	
23: Royal Bank Co. 8.	4844	Oct 2: " " 23.	1080.	
31: Smith Co. 10.	4484	13: National Cash Co. 27.	25781.	
" " 11	12111	31: Smith Co. 35.	2495.	
Sept 7: Cash	14	June 21: National Cash Co. 44.	32018.	
28: National Cash Co. 18.	6265	31: Smith Co. 392.	23545.	
" " 19	1614	Dec 21: National Cash Co. 57.	7420.	
30: Smith Co. 21.	1345	27: National Cash Co. 57.	7420.	
" " 21	17874	30: National Cash Co. 57.	7420.	
Oct 6: Royal Bank Co. 24	1800			
11: Cash	26			
13: Smith Co. 27	4988			
" " 28	1915			
31: Smith Co. 35.	240			
Nov 4: Leister & Sons 35.	25966			
10: National Cash Co. 39	100			
15: Smith Co. 41	30			
25: Royal Bank Co. 46	1148			
30: National Cash Co. 47	3405			
" " 49	3737			
Dec 9: National Cash Co. 52	14187			
" " 53	1150			
12: National Cash Co. 53	2313			
" " 55	795			
15: National Cash Co. 55	85			
21: Royal Bank Co. 56	287			
	105			
	231			
	1007804			

Bag Expense

1911	June 30	June 30	June 30	June 30
Dec 30: Balance	831421	Dec 30: National Cash Co. 63	14877	
30: Smith Co. 54	137144	30: National Cash Co. 65	16681	
" " 63	108745	30: National Cash Co. 65	886312	
	211590			
Jan 1: Smith Co. 1	16681	Jan 19: National Cash Co. 80.	352	
" " 67.	1000	Jan 4: National Cash Co. 85.	60	
" " 350	350	21: National Cash Co. 89.	91	
" " 1140	1140	30: National Cash Co. 97.	16681	
10: National Cash Co. 68.	2552	June 7: National Cash Co. 99.	184	
31: Smith Co. 65.	2863	27: National Cash Co. 119.	800	
Feb 5: National Cash Co. 75	600	13: National Cash Co. 120.	2024	
8: National Cash Co. 77	750	2: National Cash Co. 123.	16681	
29: National Cash Co. 74.	1820	July 13: National Cash Co. 697967		
Mar 4: National Cash Co. 81	585			
" " 84	150			
" " 85	200			
" " 88	88			
12: National Cash Co. 87	638			
15: National Cash Co. 88	150			
23: National Cash Co. 90	175			
27: National Cash Co. 90	300			
30: National Cash Co. 50	544			
Apr 5: National Cash Co. 85	364175			
" " 85	638			
15: National Cash Co. 98	100			
27: National Cash Co. 98	75			
30: National Cash Co. 85	467			
" " 102	167128			
" " 105	3276			
" " 106	1206			
22: National Cash Co. 109	200			
31: National Cash Co. 122	1306			
June 7: National Cash Co. 115	15377			
" " 118	115			
" " 118	150			
14: National Cash Co. 122	1204			
15: National Cash Co. 100	150			
30: National Cash Co. 100	739			
" " 396	187			
" " 176	136102			
July 9: National Cash Co. 130	50			
" " 1165	1165			
" " 1275	1275			
" " 1571	1571			
11: National Cash Co. 100	100			
13: National Cash Co. 132	1000			
	1123264			
	712709			

	July	Aug.	Sept	Oct.	Nov.	Dec.
73 Balance	69.94	16	16	16	16	16
" Jan 1st 1861	396.13					
" Exp 1st 1861	134					
76 Exp 1st 1861	135					
74 1st 1861	309.0					
31 Sundries	110					
8 Exp 1st 1861	139					
" 1st 1861	403.1					
15 Sec'd	403.143					
16 Paid 1st 1861	144.144					
17 Exp 1st 1861	144.144					
19 Exp 1st 1861	145					
23 Exp 1st 1861	145					
25 Exp 1st 1861	145					
27 Exp 1st 1861	145					
29 Exp 1st 1861	145					
31 Sundries	123					
10 Exp 1st 1861	150					
11 Exp 1st 1861	150					
19 Exp 1st 1861	157					
20 Exp 1st 1861	157					
30 Sundries	134					
9 Exp 1st 1861	164					
12 Exp 1st 1861	164					
15 Exp 1st 1861	165					
18 Exp 1st 1861	165					
20 Exp 1st 1861	166					
21 Exp 1st 1861	168					
26 Exp 1st 1861	169					
30 Exp 1st 1861	171					
31 Sundries	147					
" 1st 1861	256					
" Sundries	172					
27 Exp 1st 1861	169					
30 Sundries	161					
" 1st 1861	185					
6 Exp 1st 1861	176					
9 Exp 1st 1861	176					
11 Exp 1st 1861	176					
23 Exp 1st 1861	173					
27 Exp 1st 1861	174					
31 Sundries	173					
" 1st 1861	178					

[illegible]

Coopage.

Dec. 31. Balance 57 547126
 Dec. 31. Druggists 200. 404872
 Profits 100. 142259
 547126

Bell Union Coal & Coke Co. Stock

¹⁹¹¹
Oct 9 55 shares for inv 26 110000 ¹⁹¹²
¹⁹¹²
Dec 31 Ledger #3 177 110000

Accounts Payable)

1910	May	31	23	Sunday	114.	2,500.00	1400	1	Rep. #1	137.	71,639.61
				Monday	10	2,700.00		2	Sunday	138.	91,000.00
				Tuesday	121.	53.47		3	Monday	139.	100,000.00
				Wednesday	67.	9,333.33		4	Tuesday	140.	100,000.00
				Thursday	65.	9,333.33		5	Wednesday	141.	100,000.00
				Friday	113	2,039.17		6	Thursday	142.	100,000.00
				Saturday	120.	2,040.00		7	Friday	143.	100,000.00
				Sunday	12	9,509.16		8	Saturday	144.	100,000.00
				Monday	69	9,333.33		9	Sunday	145.	100,000.00
				Tuesday	60	9,333.33		10	Monday	146.	100,000.00
				Wednesday	122.	2,116.67		11	Tuesday	147.	100,000.00
				Thursday	119	1,809.00		12	Wednesday	148.	100,000.00
				Friday	16	10,000.00		13	Thursday	149.	100,000.00
				Saturday	66	9,333.33		14	Friday	150.	100,000.00
				Sunday	64	9,333.33		15	Saturday	151.	100,000.00
				Monday	124	6,225.00		16	Sunday	152.	100,000.00
				Tuesday	119	7.76		17	Monday	153.	100,000.00
				Wednesday	21	92,915.9		18	Tuesday	154.	100,000.00
				Thursday	84	9,333.33		19	Wednesday	155.	100,000.00
				Friday	114	7,744.63		20	Thursday	156.	100,000.00
				Saturday	78	748.43		21	Friday	157.	100,000.00
				Sunday	219	2,633.00		22	Saturday	158.	100,000.00
				Monday	25	2,227.79		23	Sunday	159.	100,000.00
				Tuesday	92	9,333.33		24	Monday	160.	100,000.00
				Wednesday	120	5,550.20		25	Tuesday	161.	100,000.00
				Thursday	27	17,000.00		26	Wednesday	162.	100,000.00
				Friday	98	1,500.00		27	Thursday	163.	100,000.00
				Saturday	43	2,500.00		28	Friday	164.	100,000.00
				Sunday	77	5,550.20		29	Saturday	165.	100,000.00
				Monday	114	5,550.20		30	Sunday	166.	100,000.00
				Tuesday	220	6.10		31	Monday	167.	100,000.00
				Wednesday	220	2,173.63		32	Tuesday	168.	100,000.00
				Thursday	104	2,169.94		33	Wednesday	169.	100,000.00
				Friday	108	2,169.94		34	Thursday	170.	100,000.00
				Saturday	114	2,227.17		35	Friday	171.	100,000.00
				Sunday	215	6.94		36	Saturday	172.	100,000.00
				Monday	55	2,227.79		37	Sunday	173.	100,000.00
				Tuesday	115	2,333.33		38	Monday	174.	100,000.00
				Wednesday	117	2,333.33		39	Tuesday	175.	100,000.00
				Thursday	101	2,227.79		40	Wednesday	176.	100,000.00
				Friday	201	7,224.70		41	Thursday	177.	100,000.00
				Saturday	215	2,227.79		42	Friday	178.	100,000.00
				Sunday	114	5.50		43	Saturday	179.	100,000.00
				Monday	114	1,550.00		44	Sunday	180.	100,000.00
				Tuesday	116	2,000.00		45	Monday	181.	100,000.00
				Wednesday	116	2,000.00		46	Tuesday	182.	100,000.00
				Thursday				47	Wednesday	183.	100,000.00
				Friday				48	Thursday	184.	100,000.00
				Saturday				49	Friday	185.	100,000.00
				Sunday				50	Saturday	186.	100,000.00
				Monday				51	Sunday	187.	100,000.00
				Tuesday				52	Monday	188.	100,000.00
				Wednesday				53	Tuesday	189.	100,000.00
				Thursday				54	Wednesday	190.	100,000.00
				Friday				55	Thursday	191.	100,000.00
				Saturday				56	Friday	192.	100,000.00
				Sunday				57	Saturday	193.	100,000.00
				Monday				58	Sunday	194.	100,000.00
				Tuesday				59	Monday	195.	100,000.00
				Wednesday				60	Tuesday	196.	100,000.00
				Thursday				61	Wednesday	197.	100,000.00
				Friday				62	Thursday	198.	100,000.00
				Saturday				63	Friday	199.	100,000.00
				Sunday				64	Saturday	200.	100,000.00
				Monday				65	Sunday	201.	100,000.00
				Tuesday				66	Monday	202.	100,000.00
				Wednesday				67	Tuesday	203.	100,000.00
				Thursday				68	Wednesday	204.	100,000.00
				Friday				69	Thursday	205.	100,000.00
				Saturday				70	Friday	206.	100,000.00
				Sunday				71	Saturday	207.	100,000.00
				Monday				72	Sunday	208.	100,000.00
				Tuesday				73	Monday	209.	100,000.00
				Wednesday				74	Tuesday	210.	100,000.00
				Thursday				75	Wednesday	211.	100,000.00
				Friday				76	Thursday	212.	100,000.00
				Saturday				77	Friday	213.	100,000.00
				Sunday				78	Saturday	214.	100,000.00
				Monday				79	Sunday	215.	100,000.00
				Tuesday				80	Monday	216.	100,000.00
				Wednesday				81	Tuesday	217.	100,000.00
				Thursday				82	Wednesday	218.	100,000.00
				Friday				83	Thursday	219.	100,000.00
				Saturday				84	Friday	220.	100,000.00
				Sunday				85	Saturday	221.	100,000.00
				Monday				86	Sunday	222.	100,000.00
				Tuesday				87	Monday	223.	100,000.00
				Wednesday				88	Tuesday	224.	100,000.00
				Thursday				89	Wednesday	225.	100,000.00
				Friday				90	Thursday	226.	100,000.00
				Saturday				91	Friday	227.	100,000.00
				Sunday				92	Saturday	228.	100,000.00
				Monday				93	Sunday	229.	100,000.00
				Tuesday				94	Monday	230.	100,000.00
				Wednesday				95	Tuesday	231.	100,000.00
				Thursday				96	Wednesday	232.	100,000.00
				Friday				97	Thursday	233.	100,000.00
				Saturday				98	Friday	234.	100,000.00
				Sunday				99	Saturday	235.	100,000.00
				Monday				100	Sunday	236.	100,000.00
				Tuesday				101	Monday	237.	100,000.00
				Wednesday				102	Tuesday	238.	100,000.00
				Thursday				103	Wednesday	239.	100,000.00
				Friday				104	Thursday	240.	100,000.00
				Saturday				105	Friday	241.	100,000.00
				Sunday				106	Saturday	242.	100,000.00
				Monday				107	Sunday	243.	100,000.00
				Tuesday				108	Monday	244.	100,000.00
				Wednesday				109	Tuesday	245.	100,000.00
				Thursday				110	Wednesday	246.	100,000.00
				Friday				111	Thursday	247.	100,000.00
				Saturday				112	Friday	248.	100,000.00
				Sunday				113	Saturday	249.	100,000.00
				Monday				114	Sunday	250.	100,000.00
				Tuesday				115	Monday	251.	100,000.00
				Wednesday				116	Tuesday	252.	100,000.00
				Thursday				117	Wednesday	253.	100,000.00
				Friday				118	Thursday	254.	100,000.00
				Saturday				119	Friday	255.	100,000.00
				Sunday				120	Saturday	256.	100,000.00
				Monday				121	Sunday	257.	100,000.00
				Tuesday				122	Monday	258.	100,000.00
				Wednesday				123	Tuesday	259.	100,000.00
				Thursday				124	Wednesday	260.	100,000.00
				Friday				125	Thursday	261.	100,000.00
				Saturday				126	Friday	262.	100,000.00
				Sunday				127	Saturday	263.	100,000.00
				Monday				128	Sunday	264.	100,000.00
				Tuesday				129	Monday	265.	100,000.00
				Wednesday				130	Tuesday	266.	100,000.00
				Thursday				131	Wednesday	267.	100,000.00
				Friday				132	Thursday	268.	100,000.00
				Saturday				133	Friday	269.	100,000.00
				Sunday				134	Saturday	270.	100,000.00
				Monday				135	Sunday	271.	100,000.00
				Tuesday				136	Monday	272.	100,000.00
				Wednesday				137	Tuesday	273.	100,000.00
				Thursday				138	Wednesday	274.	100,000.00
				Friday				139	Thursday	275.	100,000.00
				Saturday				140	Friday	276.	100,000.00
				Sunday				141	Saturday	277.	100,000.00
				Monday				142	Sunday	278.	100,000.00
				Tuesday				143	Monday	279.	100,000.00
				Wednesday				144	Tuesday	280.	100,000.00
				Thursday				145	Wednesday	281.	100,000.00
				Friday				146	Thursday	282.	100,000.00
				Saturday				147	Friday	283.	100,000.00
				Sunday				148	Saturday	284.	100,000.00
				Monday				149	Sunday	285.	100,000.00
				Tuesday				150	Monday	286.	100,000.00
				Wednesday				151	Tuesday	287.	100,000.00
				Thursday				152	Wednesday	288.	100,000.00
				Friday				153	Thursday	289.	100,000.00
				Saturday				154	Friday	290.	100,000.00
				Sunday				155	Saturday	291.	100,000.00
				Monday				156	Sunday	292.	100,000.00
				Tuesday				157	Monday	293.	100,000.00
				Wednesday				158	Tuesday	294.	100,000.00
				Thursday				159	Wednesday	295.	1

Accounts Payable)

[illegible]

Sales Allowances

1912									
Jan.	8	Swindell & Co. 347	520	Jan.	31	Capital Bros. del.	72	180	
	9	" 1044	85	Feb.	5	" 1044	76	4513	
	"	" 1144-1044	5385		9	" 1044	77	1250	
	10	" 1144-1044 68	1500		17	" 1044	77	335	
	"	" 1144-1044 3477	3570	Mar.	4	" 1044	54	1215	
	13	" 1144-1044 3503	800		5	" 1044	87	285	
	"	" 1144-1044 3504	1136		13	" 1044		426151	
	16	" 1144-1044 3506 69	36500						
	18	" 1144-1044 3512 70	1400						
	22	" 1144-1044 3516	9425						
	"	" 1144-1044 3517	2250						
	"	" 1144-1044 3520	1200						
	"	" 1144-1044 3522 71	7928						
	26	" 1144-1044 3525	4097						
	"	" 1144-1044 3529	600						
	29	" 1144-1044 3532 72	1100						
	31	" 1144-1044	28818						
Feb.	5	" 1144-1044 3536 75	1497						
	8	" 1144-1044 3538 76	1500						
	"	" 1144-1044 3545	415						
	"	" 1144-1044 3547	106						
	9	" 1144-1044 3570 77	800						
	"	" 1144-1044 3572	1136						
	10	" 1144-1044 3575 78	1500						
	"	" 1144-1044 3580	2150						
	"	" 1144-1044 3582	5920						
	17	" 1144-1044 3584 79	67302						
	"	" 1144-1044 3586	800						
	"	" 1144-1044 3587	285						
	"	" 1144-1044 3588	4055						
	"	" 1144-1044 3590	650						
	20	" 1144-1044 3594 80	200						
	17	" 1144-1044 1216	1525						
	26	" 1144-1044 3600 81	675						
	"	" 1144-1044 3601	600						
	29	" 1144-1044 3602	78812						
Mar.	"	" 1144-1044 1223 84	2040						
	"	" 1144-1044 3606	7706						
	"	" 1144-1044 3610	5115						
	5	" 1144-1044 3615 85	15125						
	"	" 1144-1044 3617	379						
	6	" 1144-1044 3616 86	2603						
	8	" 1144-1044 3619	3040						
	"	" 1144-1044 3620 87	1504						
	"	" 1144-1044 3621	2300						
	12	" 1144-1044 3624	60000						
	13	" 1144-1044 3624	3907						
	"	" 1144-1044 3626 88	680						
			25252						
			424259						
			424259						

Sales Allowances

1901		1902	
Aug. 31 Balance 107.	12 416.2	Sept. 11 Empire Oil Co. 155	.09
31 Mauds Co. 1522.148	6.00	" " " " "	.07
" C.P. Caples 1551.	6.80	" " " " "	41.5
" J. Robinson 1556.	449.60	17 Franklin & Wall 189	100.0
" " "	223.70	" " " " "	38.0
Sept 11 Cash 1536.153	250	21 Cash 1590.90	40.0
" D.S.W.P.R. 4495.154	1800	Oct 13 Balance 109	14 417.31
" " " "	300		
" " " " "	11.46		
" " " " "	3.80		
" " " " "	37.10		
" " " " "	500		
" " " " "	7000		
" " " " "	40.50		
" " " " "	64.82		
Oct. 30 Cash 160	2289.0		
" " " " "	993		
" " " " "	500		
" " " " "	500		
" " " " "	1700		
" " " " "	1500		
" " " " "	300		
" " " " "	758.4		
" " " " "	300		
" " " " "	600		
" " " " "	75		
" " " " "	450		
" " " " "	75		
" " " " "	1045		
" " " " "	01		
" " " " "	600		
" " " " "	758.60		
" " " " "	1033		
" " " " "	3500		
" " " " "	5670		
" " " " "	10000		
" " " " "	2289.0		
" " " " "	26		
" " " " "	3000		
" " " " "	1511		
" " " " "	50		
" " " " "	1592		
" " " " "	7170		
" " " " "	700		
" " " " "	700		
" " " " "	1700		
" " " " "	115		
" " " " "	1408.65		

Sales Allowance

1901		1902	
Nov. 13 Balance 108.	14 412.51	Nov. 8 G. Davis 175	06.3
16 Phillips & Co. 175	7000	13 Cash 1550	26.50
" " " " "	1740	" " " " "	01
" " " " "	500	14 Empire Oil Co. 159	19
" " " " "	5990	" " " " "	55.29
" " " " "	700	31 Cash 1500	15 246.71
" " " " "	1018		
" " " " "	600		
" " " " "	79.50		
" " " " "	2289.0		
" " " " "	381		
" " " " "	500		
" " " " "	500		
" " " " "	1500		
" " " " "	37		
" " " " "	424.23		
" " " " "	800		
" " " " "	35		
" " " " "	790		
" " " " "	717		
" " " " "	931.4		
" " " " "	2289.0		
" " " " "	15636.12		

Accounts Receivable Ledger "G"

1911

Aug 1 Balance	92	8535075
31 Cash	17	852457
Journal	10	197503
Sales Pgs	26	6787421
Sept 291	1	584000
Balance 299	1	664000
Sept 20 Cash	22	957360
Journal	19	79254
Sales Pgs	49	6355951
Sept 245	1	38560
Balance 299	1	3448
Oct 31 Cash	45	392791
Journal	54	8256
Sales Pgs	69	4573885
Nov 291	1	18450
Nov 29 Cash	54	44028
Journal	47	32628
Sales Pgs	85	3056894
Balance 300	51	4644
Dec 30 Journal	49	45348
Stamps	150	304
Cash	72	518654
Journal	60	341954
Sales Pgs	96	2508502
Journal	64	12044

Jan 1 Balance	72	6250133
31 Journal	103	917174
Sales Pgs	292	20250
Stamps	149	30
Cash	85	445243
Journal	73	92197
Cash	82	98822
Sales Pgs	95	337150
Feb 291	111	1583040
Journal	83	50036
Mar 31 Stamps	149	101938

Aug 31 Cash	17	423830
Receipts	6	719629
Journal	10	119715
Sales Pgs	26	1186178
Sept 291	1	2017
Balance 299	1	271579
Sept 20 Cash	22	259727
Receipts	19	196201
Sales Pgs	21	1319254
Sept 245	1	12579
Balance 299	1	408606
Oct 31 Cash	45	531203
Receipts	8	1505409
Sales Pgs	35	1545
Nov 291	1	10855
Nov 29 Cash	47	1630403
Receipts	34	4979
Dec 30 Journal	54	3071162
Stamps	151	40
Receipts	10	779205
Journal	47	130277
Sales Pgs	293	840
Dec 30 Stamps	150	22198
Cash	72	2004388
Journal	60	704150
Sales Pgs	54	658248
Journal	395	4095
Receipts	12	251143
Balance	12	6250133

Jan 17 Journal	69	17409
31 Sales Pgs	65	133538
Journal	394	12691
Stamps	72	5970
Stamps	149	110
Cash	85	1068873
Receipts	15	810816
Feb 291	74	779355
Sales Pgs	394	10516
Journal	82	37583
Cash	95	1478456
Receipts	16	651824
Journal	357	62200
Mar 30 Sales Pgs	50	652959
Stamps	394	2753
Receipts	149	117
Receipts	17	147247
Balance	17	9806740

Accounts Receivable Ledger "C"

1912			1912		
Feb 27	Balance	2786364	Feb 27	Journal	82. 35/11
"	Journal	82. 25063	"	Cash	75. 10979.12
"	Cash	95 41591.15	"	Pie's Rev	16. 1238.32
"	Sales Pgs	212 351.00	"	Spool & Sups	26. 583390
"	"	111. 46614.36	"	"	394. 2745
Mar. 20	Stamps	149. 32	"	Stamps	149. 20
"	Journal	92 177.58	"	Pie's Rev	17. 425243
"	Cash	107. 75420.6	"	Journal	92. 35839
"	Spool & Sups	770 1709.15	"	Cash	107. 61444.9
"	"	177. 21511.33	"	Pie's Rev	18. 560.32
"	Blanc	300 160.00	"	Cash	120. 170849.2
Apr. 30	Cash	170 26487.0	"	Journal	101. 9154
"	Journal	101. 849	"	Spool & Sups	85. 347339
"	Sales Pgs	156 36587.47	"	"	395. 50124.5
"	"	287 13893.3	"	"	235367.7
May 20	Stamps	146. 05	"	Pie's Rev	70. 85421.2
"	Cash	135 15464.6	"	Spool & Sups	92. 538795
"	Journal	114 63755	"	"	395. 5287
"	Sales Pgs	185 396152.6	"	Journal	114. 34484
"	"	285 14587.1	"	Spool & Sups	100. 977500
"	Journal	13 21003.5	"	Cash	13. 17601.99
"	Pie's Rev	175 2686.3	"	Pie's Rev	21. 1614.59
"	"	272 50669.26	"	Journal	125 24061
"	"	216 298.10	"	Spool & Sups	396 7272.2
"	"	P.C. 271 1536.62	"	Spool & Sups	110. 8751.50
"	"	279 46304.00	"	"	399. 33218
"	Journal	139 11530.0	"	Cash	31. 4180.75
"	Sales Pgs	287 29746	"	Pie's Rev	23. 2434.66
"	"	287 75855	"	Journal	139 16537.2
"	"	268 37253.49	"	Spool & Sups	123. 13764.85
Aug 21	Stamps	299	"	"	399. 143
"	Cash	149 399.49	"	Cash	49. 2131.88
"	Sales Pgs	33 497546.0	"	Pie's Rev	28 2383.12
"	"	270 2702.30	"	Journal	149 3797.95
"	Journal	149 11168.3	"	Spool & Sups	351. 5487.8
"	"	65 1119.67	"	Cash	65 2498.26
Sept 30	Cash	85 125895	"	Pie's Rev	27 44589.6
"	"	65 528158.8	"	Spool & Sups	353. 86418
"	Sales Pgs	85 337426	"	Journal	134 178540.1
"	"	96 49771.84	"	Cash	160 26467.8
"	"	298 149332.5	"	Pie's Rev	27 2022.71
Nov 30	Stamps	298 177	"	Cash	87 4350.71
"	"	177	"	Journal	111 20307
"	"	177	"	Spool & Sups	149 14781.06
"	"	177	"	Journal	356 3862.66
"	"	177	"	Pie's Rev	298 2117.71
"	"	177	"	Journal	196 9822.39
"	"	177	"	"	218115539

Accounts Receivable Ledger "D"

1912			1912		
Aug 1	Balance	8202919	Aug 21	Cash	17. 36611.97
"	Cash	17. 1077.48	"	Pie's Rev	17. 3671.45
"	Journal	10. 468016	"	Journal	10. 736028
"	Sales Pgs	26 6355287	"	Spool & Sups	1518526
"	"	297 2140330	"	"	590. 411465
"	"	297 2140330	"	Journal	10. 111465
"	"	297 2140330	"	Cash	30. 360138.6
Sept 20	Cash	32 111494	"	Pie's Rev	7. 116813
"	Journal	19. 215241	"	Journal	19. 259341
"	Sales Pgs	49 4929672	"	Spool & Sups	21. 1272125
"	"	245 1645463	"	"	591. 28161
"	"	299 6000	"	Journal	518. 28161
"	Journal	21. 3171	"	Pie's Rev	45. 3679637
"	Cash	45. 111494	"	Spool & Sups	55. 270
"	Journal	34 470373	"	Pie's Rev	8. 367284
"	Sales Pgs	69 4550156	"	Spool & Sups	35 2455807
"	"	294 22075	"	Journal	391. 56167
"	"	299 11000	"	Pie's Rev	34 4678224
Nov 29	Cash	57 420649	"	Spool & Sups	35 02
"	Journal	47 390151	"	Spool & Sups	47 1446092
"	Sales Pgs	85 2041766	"	"	392 24261
"	"	293 58775	"	Cash	57 2614137
"	"	299 111494	"	Journal	151. 133
"	Journal	48 33458	"	Pie's Rev	10 557686
"	Stamps	150 19373 249	"	Journal	47 292273
"	Cash	72 368155	"	Spool & Sups	71 2344168
"	Journal	60 165170	"	Cash	150 79
"	Sales Pgs	96 115690	"	Journal	72 1729267
"	"	293 345623	"	Spool & Sups	60 186243
"	Journal	61 2116226	"	Spool & Sups	54 908405
"	"	299 17312	"	Pie's Rev	12 2641483
"	"	299 17312	"	Spool & Sups	141 135333
"	"	299 17312	"	"	20924475
Jan 1	Balance	30924475	Jan 31	Spool & Sups	45 1025418
"	Journal	49 4113533	"	Journal	394 53364
"	"	69 9520	"	Stamps	72 14822
"	Sales Pgs	72 87095	"	Cash	149 32
"	"	105 700509	"	Pie's Rev	85 1622561
"	"	292 150	"	Journal	18 3168678
"	Stamps	149 15	"	Spool & Sups	351 2135125
"	Cash	85 438935	"	Spool & Sups	74 461028
Feb 29	Journal	62 163147	"	Journal	394 13905
"	"	95 241648	"	Stamps	82 60749
"	Sales Pgs	111 6556746	"	Cash	149 72
"	"	299 1650948	"	Pie's Rev	95 1005242
"	"	299 1650948	"	Journal	16 51283
"	"	299 1650948	"	Balance	472188
"	"	299 1650948	"	"	6550948

Bonus to Employees

1914	1914
Dec 25 2nd 100	Dec 31 Journal 1500
Dec 24 C. 34108 43	Dec 30 P & L 794.90
Dec 15 Freeman 55	
	794.90

794.90

Accounts Receivable, Ledger A.

1914	1914
Oct 31 Balance 116.14071389	Nov 30 Receipts 289.70
" Sales Office 82.163.41	" Cash 102.4269032
" Journal 178.137386	" New Rec 81.623384
" Cash 102.10557.4	" Journal 182.571051
" Sales Rec 113.5785406	" Laundry Co. 161.1930582
" " (Paid) 11.117950	" " 359.7182185
" Journal 182.173164	Dec 31 Cash 119.7454163
" Sales Office 83.3740	" Paid Book 32.1076941
" Journal 184.782325	" Journal 186.1424070
Dec 31 Cash 117.1076448	" Laundry Co. 173.7156369
" Sales Rec (Paid) 12.10175	" " 361.1180402
" Journal 116.190165	31 Ledger 181.18632477
" Sales Rec 118.6893923	
31 Sales Office 84.10692	
" Journal 199.710674	
	38603677

38603677

Accts. Receivable. Ledger B.

1914				1915						
Nov	1	Balance	118.	65781.92	Nov	30	Stamps	288.		13
	30	Stamps	248.	24			Cash	102.	25441.22	
	"	Cash	102.	2480.82		"	Bus Rec	31.	21888.8	
	"	Sales Reg	123.	37815.54		"	Journal	182.	21956	
	"	"	11	77563		"	Laundry Co.	161.	87843.6	
	"	Journal	182.	3771.9		"	"	559.	357.3	
Dec	31	Cash	119.	5181.22	Dec	31	Stamps	287.		63
	31	Sales Reg (Cont)	12	14475		"	Cash	119.	18114.31	
	"	Journal	196	4985		"	Bus Rec	33.	77232.3	
	"	Sales Reg	145.	75415.45		"	Journal	186.	65338	
						"	Laundry Co.	173.	11383.97	
						"	"	361.	75236.46	
						31	Ledger # B.	185.	67271.77	
									12714985	
									13714985	

13714985

12714985

Unpaid Coupons for Bond Int.

1914				1915					
Oct	20	Journal	335	113850.00	Jan	1	Bd #	114.	22770.00
Apr	29	Hompson Bk	1000.	27988.00	Apr	30	rd Bond Int	76.	3822.50
					May	21	"	102.	5132.50
					May	5	"	26.	1240.00
					Oct	9	"	26.	5177.000
				148500.00					12051000

14095000

Auto. Rec. Ledger C.

1911		1912	
Nov.	30	Balance	121. 8529.101
		Cash	102. 25254.4
		Salts Reg.	123. 4807.09
		" " " "	11. 45675
		Journal	187. 33664
Dec.	31	Salts Reg.	123. 45675
		Salts Reg. (Cont.)	12. 22488
		Journal	196. 153746
		Salts Reg.	148. 46551.69
			19658607

1911		1912	
Nov.	30	Cash	102. 37572.34
		Rec. Rec.	31. 68217.39
		Journal	187. 6620
		Lundry Co.	161. 13711.67
		" " " "	359. 54448.8
Dec.	31	Cash	119. 27399.63
		Rec. Rec.	33. 72051.9
		Journal	196. 17679
		Lundry Co.	173. 178104.4
		" " " "	361. 48087
		Salts Reg.	187. 87652.67
			19658607

Auto. Rec. Ledger D.

1911		1912	
Nov.	30	Balance	172. 95044.66
		Rec. Rec.	248. 56
		Cash	102. 44524.3
		Salts Reg.	123. 40755.00
		" " " "	11. 10425
		Journal	187. 12448.6
Dec.	31	Cash	119. 27399.63
		Salts Reg. (Cont.)	12. 22488
		Journal	196. 153746
		Salts Reg.	148. 46551.69
			18110872

1911		1912	
Nov.	30	Cash	102. 3061351
		Rec. Rec.	31. 10481.11
		Journal	187. 77199
		Lundry Co.	161. 1295554
		" " " "	359. 55607.3
Dec.	31	Salts Reg.	123. 555198.9
		Salts Reg.	207. 77
		Cash	119. 266133.2
		Rec. Rec.	32. 17575.7
		Journal	196. 99965
		Lundry Co.	173. 15061.69
		" " " "	361. 27346.9
		Salts Reg.	187. 87652.67
			18110872

Account of Bond Int.

1900		1901			
Apr.	15. Sundries 2170	10710.00	Jan. 1. Left	2147.	2250.00
	20. Sundries 76.00	2277.00	" 1. do	52.	2250.00
	1. bond 212.00	172.00	Feb. 27.	57.	7500.00
		1100.00	Mar. 31.	66.	7500.00
					4500.00
May	27. bond 197.5	9450.00	Apr. 30. Bond Int.	80.	7500.00
Oct.	21. Sundries 101.5	8660.00	May 31.	88.	7500.00
	21. Sundries 102.5	8672.50	June 30.	97.	7500.00
	19. bond 212.00	212.00	July 31.	106.	7500.00
			Aug. 31.	114.	7500.00
			Sept. 30.	122.	7500.00
		4500.00			4500.00
Nov.	22. Sundries 180.00	1870.00	Oct. 31. Bond Int.	124.	7500.00
	27. Sundries 180.00	1870.00	Nov. 30.	132.	7500.00
Apr.	5. Sundries 190.00	3770.00	Dec. 31.	140.	7500.00
	13. Sundries 192.00	6600.00	Jan. 31.	148.	7500.00
Sept.	27. 0-327.00	2570.00	Feb. 28.	156.	7500.00
Oct.	2. Sundries 25.00	5000.00	Mar. 31.	164.	7500.00
	9. Sundries 26.00	6600.00	Apr. 30.	172.	7500.00
	10. Sundries 26.00	3170.00	May 31.	180.	7500.00
Nov.	75. 0-327.00	2570.00	June 30.	188.	7500.00
Apr.	1. Sundries 25.00	3000.00	July 31.	196.	7500.00
	4. Sundries 66.00	6600.00	Aug. 31.	204.	7500.00
	1. Sundries 227.70	2277.00	Sept. 30.	212.	7500.00
	21. Sundries 22.00	2277.00	Oct. 30.	220.	7500.00
Sept.	27. Sundries 25.00	2570.00	Nov. 30.	228.	7500.00
Oct.	9. Sundries 164.00	2570.00	Dec. 28.	236.	7500.00
Dec.	31. Sundries 263.00	2570.00	Jan. 31.	244.	7500.00
			Feb. 29.	252.	7500.00
			Mar. 29.	260.	7500.00
			Apr. 30.	268.	7500.00
			May 31.	276.	7500.00
			June 29.	284.	7500.00
			July 31.	292.	7500.00
			Aug. 30.	300.	7500.00
			Sept. 30.	308.	7500.00
			Oct. 30.	316.	7500.00
			Nov. 30.	324.	7500.00
			Dec. 31.	332.	7500.00
		202500.00			202500.00

Evangelical Propag.

1912				1913				1914				1915				1916				1917				1918				1919				1920				1921				1922				1923				1924				1925				1926				1927				1928				1929				1930				1931				1932				1933				1934				1935				1936				1937				1938				1939				1940				1941				1942				1943				1944				1945				1946				1947				1948				1949				1950				1951				1952				1953				1954				1955				1956				1957				1958				1959				1960				1961				1962				1963				1964				1965				1966				1967				1968				1969				1970				1971				1972				1973				1974				1975				1976				1977				1978				1979				1980				1981				1982				1983				1984				1985				1986				1987				1988				1989				1990				1991				1992				1993				1994				1995				1996				1997				1998				1999				2000				2001				2002				2003				2004				2005				2006				2007				2008				2009				2010				2011				2012				2013				2014				2015				2016				2017				2018				2019				2020				2021				2022				2023				2024				2025				2026				2027				2028				2029				2030				2031				2032				2033				2034				2035				2036				2037				2038				2039				2040				2041				2042				2043				2044				2045				2046				2047				2048				2049				2050				2051				2052				2053				2054				2055				2056				2057				2058				2059				2060				2061				2062				2063				2064				2065				2066				2067				2068				2069				2070				2071				2072				2073				2074				2075				2076				2077				2078				2079				2080				2081				2082				2083				2084				2085				2086				2087				2088				2089				2090				2091				2092				2093				2094				2095				2096				2097				2098				2099				2100			
Sept	9	Central Enslav	97	2760	Oct	21	Wash. Gen. Off. de	80	1350																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
May	29	K. N. Mingo	111	1858	Dec	31	Ledge #3	131	119.19																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Nov.	39	Franklin Mungie	151	3075																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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Account of the 8th District

[illegible]

Thomas Edison

(Personal 90)

1912

Dec 31 Ledger #3

281

9782789

Dec 31

31

Puffed Bag 176

303905

" " 864121

864121

" " 5396416

5396416

" " 162181

162181

" " 740116

740116

" " 2782789

2782789

9782789

Cement in Warehouse, Charleston

140	141
Jan. 31	1494.69
Feb. 28	1866.25
Mar. 31	2741.00
Apr. 30	1910.00
May 31	195.00
June 30	574.00
July 31	1184.00
Aug. 31	1194.00
Sept. 30	1062.00
Oct. 31	1142.00
Nov. 30	2005.00
Dec. 31	162.00
Jan. 31	118.00
Feb. 28	162.00
Mar. 31	169.00
Apr. 30	385.00
May 31	114.00
June 30	144.00
July 31	212.00
Aug. 31	223.00
Sept. 30	232.00
Oct. 31	397.00
Nov. 30	352.00
Dec. 31	246.00
Jan. 31	408.00
Feb. 28	1335.00
Mar. 31	257.00
Apr. 30	295.00
May 31	16387
June 30	1000857
July 31	16387
Aug. 31	1000857
Sept. 30	16387
Oct. 31	1000857
Nov. 30	16387
Dec. 31	1000857

M. Garago & Son Storage.

Sept 30 1910 @ .585 161 4063.08 Oct 31 1910 6910 lbs @ .585 173 4063.08

[illegible]

79	30615	June	31	510 2400	@ 10	50	50615
78	60200	Mar.	31	3036	"	67	57333
77	75444	Apr.	30	973	"	81	53444
76	549435	"	"	1195	"	66	762435
75	389945	"	"	824	"	66	349945
74	76633	May	31	21092	"	91	169166
73	141479	"	"	23045	"	97	1298479
72	191479	June	30	23892	"	98	5698479
71	191479	July	31	2389	"	107	14209
70	324444	"	"	2381	"	578	1042444
69	324444	Aug.	31	1738	"	115	1042444
68	324444	"	"	2446	"	978	1714444
67	587544	Sep.	30	24032	"	125	12109
66	30200	"	"	11612	"	550	169444
65	124444	Oct.	31	24044	"	106	199444
64	324444	"	"	2444	"	975	161244
63	324444	Nov.	30	10076	"	144	600120
62	587544	"	"	9446	"	612	324444
61	587544	Dec.	31	7511	"	153	549675
60	587544	"	"	8350	"	651	214490
59	104044	Jan.	31	54944	"	169	364544
58	104044	"	"	54944	"	169	54944
57	753444	Feb.	28	133044	"	177	305080
56	753444	"	"	86134	"	711	27492
55	244444	Mar.	31	50244	"	187	400344
54	244444	"	"	84945	"	655	443444
53	244444	Apr.	30	107784	"	198	706080
52	244444	"	"	2289	"	666	535444
51	244444	May	31	10477	"	212	766815
50	798833	"	"	10535	"	626	169448
49	798833	June	30	11747	"	223	735393
48	798833	"	"	15523	"	668	24202
47	798833	July	31	129514	"	252	277266
46	798833	"	"	32854	"	614	201750
45	798833	Aug.	31	119472	"	12	178094
44	798833	"	"	171804	"	57	178094
43	798833	Sep.	30	76694	"	21	599415
42	798833	"	"	9733	"	559	375202
41	798833	Oct.	31	8367	"	35	449218
40	798833	"	"	24734	"	568	324444
39	798833	Nov.	30	61624	"	48	545664
38	798833	"	"	24334	"	568	157101
37	798833	Dec.	30	60444	"	62	324444
36	798833	Jan.	31	52664	"	73	324444
35	798833	"	"	13135	"	82	121234
34	798833	Feb.	29	3584	"	92	446635
33	798833	Mar.	30	23344	"	574	445333
32	798833	"	"	172044	"	113	445333
31	798833	Apr.	30	24034	"	149	53333

Cement in Mass. - New York.

1941	202044	"	578	10220529	1941	30	20434	578	103	115644
May	30	15804	"	578	121924	"	7864	"	578	454409
June	31	20715	"	578	121924	"	7864	"	578	454409
July	30	20700	"	578	121924	"	7864	"	578	454409
Aug	31	14934	"	578	121924	"	7864	"	578	454409
Sept	30	14934	"	578	121924	"	7864	"	578	454409
Oct	30	14934	"	578	121924	"	7864	"	578	454409
Nov	30	14934	"	578	121924	"	7864	"	578	454409
Dec	31	14934	"	578	121924	"	7864	"	578	454409
1942	202044	"	578	10220529	1942	30	20434	578	103	115644
May	30	15804	"	578	121924	"	7864	"	578	454409
June	31	20715	"	578	121924	"	7864	"	578	454409
July	30	20700	"	578	121924	"	7864	"	578	454409
Aug	31	14934	"	578	121924	"	7864	"	578	454409
Sept	30	14934	"	578	121924	"	7864	"	578	454409
Oct	30	14934	"	578	121924	"	7864	"	578	454409
Nov	30	14934	"	578	121924	"	7864	"	578	454409
Dec	31	14934	"	578	121924	"	7864	"	578	454409

Cement and Warehouse, Brunswick

1870	Jan	1	264	26	222	44	Jan	31	646	60	53	65	98	48	28	18	28	18	28	18	
Feb	28	446	60	446	60	446	60	Feb	28	124	"	"	60	85	26	85	26	85	26	85	26
Mar	31	446	116	446	116	446	116	Mar	31	762	"	"	60	128	22	128	22	128	22	128	22
Apr	30	300	178	300	178	300	178	Apr	30	184	"	"	67	89	18	89	18	89	18	89	18
May	31	446	116	446	116	446	116	May	31	652	"	"	81	162	57	162	57	162	57	162	57
Jun	30	300	178	300	178	300	178	Jun	30	269	"	"	91	162	57	162	57	162	57	162	57
Jul	31	446	116	446	116	446	116	Jul	31	1195	"	"	107	162	57	162	57	162	57	162	57
Aug	31	446	116	446	116	446	116	Aug	31	762	"	"	115	162	57	162	57	162	57	162	57
Sep	30	300	178	300	178	300	178	Sep	30	124	"	"	125	162	57	162	57	162	57	162	57
Oct	31	446	116	446	116	446	116	Oct	31	608	"	"	126	162	57	162	57	162	57	162	57
Nov	30	300	178	300	178	300	178	Nov	30	124	"	"	126	162	57	162	57	162	57	162	57
Dec	31	446	116	446	116	446	116	Dec	31	1085	"	"	155	162	57	162	57	162	57	162	57
Jan	30	300	178	300	178	300	178	Jan	30	106	"	"	166	162	57	162	57	162	57	162	57
Feb	28	446	60	446	60	446	60	Feb	28	185	"	"	169	162	57	162	57	162	57	162	57
Mar	31	446	116	446	116	446	116	Mar	31	504	"	"	177	162	57	162	57	162	57	162	57
Apr	30	300	178	300	178	300	178	Apr	30	535	"	"	187	162	57	162	57	162	57	162	57
May	31	446	116	446	116	446	116	May	31	594	"	"	198	162	57	162	57	162	57	162	57
Jun	30	300	178	300	178	300	178	Jun	30	143	"	"	212	162	57	162	57	162	57	162	57
Jul	31	446	116	446	116	446	116	Jul	31	302	"	"	223	162	57	162	57	162	57	162	57
Aug	31	446	116	446	116	446	116	Aug	31	143	"	"	232	162	57	162	57	162	57	162	57
Sep	30	300	178	300	178	300	178	Sep	30	143	"	"	12	162	57	162	57	162	57	162	57
Oct	31	446	116	446	116	446	116	Oct	31	305	"	"	20	162	57	162	57	162	57	162	57
Nov	30	300	178	300	178	300	178	Nov	30	120	"	"	35	162	57	162	57	162	57	162	57
Dec	31	446	116	446	116	446	116	Dec	31	120	"	"	45	162	57	162	57	162	57	162	57
Jan	30	300	178	300	178	300	178	Jan	30	120	"	"	62	162	57	162	57	162	57	162	57
Feb	28	446	60	446	60	446	60	Feb	28	120	"	"	73	162	57	162	57	162	57	162	57
Mar	31	446	116	446	116	446	116	Mar	31	120	"	"	82	162	57	162	57	162	57	162	57
Apr	30	300	178	300	178	300	178	Apr	30	120	"	"	92	162	57	162	57	162	57	162	57
May	31	446	116	446	116	446	116	May	31	120	"	"	103	162	57	162	57	162	57	162	57
1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892

Cement in Warehouse, ap Bradley

[illegible]

Cement in Warehouse, Mason & Harney Co.									
Apr 31	1500	@ .56	34	84000	Oct 31	500	@ .56	35	25000
Apr 30	750	" .56	62	42000	Nov 30	1000	" "	48	50000
May 29	1250	" "	82	70000	Dec 31	750	" "	73	425000
July 31	570	" .585	139	27250	Jan 29	1250	" "	82	71000
				27250	Aug 31	500	" .585	150	29250
	4000			226850		4000			226850

Cement in Warehouse, Kennedy Square

Jan. 1	Feb. 1	✓ 1 1/2	189	57 1/2	8 1/2	Oct. 31	1 1/2	0575	35	87
		1 1/2			8 1/2		1 1/2			87

Cement in Warehouse, Tampa, Fla.

Cantonment, Bareilly, Rampur, Feroz						
Oct 11	500	174 105	278 00	80	576 144	4768
Jan 11	500	144 170	344 50	11	240	14504
Mar 11	1000	655 187	655 40	31	180	10020
Apr 11	500	644 198	323 40	28	100	8000
May 11	500	676 211	313 40	31	400	27960
Jun 11	1100	614 251	105 40	183	655	11000
Aug 11	600	59 12	354 40	30	384	25232
			May 11	20	212	1510
			July 11	145	225	10087
			July 11	246	232	16113
			"	500	646	32500
			"	500	626	31300
			Aug 11	600	614	28000
			Sept 11	600	12	36000
			Oct 11	2012	20	987
			"	600	59	35400
4700		29070		4700		29670

Cement in Warehouse, Pensacola

1000	Jan	1	24	40	200	185	07	233467	Jan	31	1002	2	4000	07	50	579.59
Jan	1	24	40	200	185	07	233467	Jan	31	1160	"	"	"	"	60	585.52
Jan	1	24	40	200	185	07	233467	Jan	31	1012	"	"	"	"	67	585.52
Jan	1	24	40	200	185	07	233467	Jan	31	750	"	"	"	"	81	585.52
Jan	1	24	40	200	185	07	233467	Jan	31	400	"	"	"	"	91	585.52
Jan	1	24	40	200	185	07	233467	Jan	31	1185	"	"	"	"	98	585.52
Jan	1	24	40	200	185	07	233467	Jan	31	1287	"	"	"	"	102	585.52
Jan	1	24	40	200	185	07	233467	Jan	31	1304	"	"	"	"	106	585.52
Jan	1	24	40	200	185	07	233467	Jan	31	1513	"	"	"	"	144	585.52
Jan	1	24	40	200	185	07	233467	Jan	31	1055	"	"	"	"	153	585.52
Jan	1	24	40	200	185	07	233467	Jan	31	1180	"	"	"	"	169	585.52
Jan	1	24	40	200	185	07	233467	Jan	31	1381	"	"	"	"	177	585.52
Jan	1	24	40	200	185	07	233467	Jan	31	100304	"	"	"	"	"	510.00
100304							580.67									

George T. Rensle Storage.

[illegible]

Cement in Warehouse, Wilmington.

[illegible]

Fertilizer Bags

[illegible]

Ukraine of Waage

July 9	C- 36795	174	126	July 1	126	192	44391
Dec 31	Ed Bird	267	92822	July 28	126	94	95823
	Lodge #23		100017	July 9	C- 36795	244	100017

Thomas W. Edison (Comstock Notes)

July 3	2	day	7	5	100000	July 4	3	day	94	500000
4					100000	5			1	500000
7					100000	10			1	500000
15					100000	15			96	500000
16					100000	16			97	500000
21					100000	17			2	500000
21					100000	19			2	500000
25					100000	24			99	500000
27			9		100000	25			100	500000
27			11		100000	26			1	500000
28					100000	27			101	500000
4					100000	5			1	500000
5					100000	7			102	500000
10					100000	10			1	500000
12					100000	15			103	500000
14					100000	17			1	500000
1					100000	19			104	500000
21					100000	21			105	500000
22					100000	22			1	500000
24					100000	26			1	500000
24					100000	27			1	500000
24					100000	28			110	500000
1			13		100000	29			111	500000
2					100000	2			1	500000
3					100000	3			1	500000
4					100000	4			1	500000
7					100000	5			112	500000
8					100000	10			1	500000
9					100000	9			1	500000
11					100000	10			1	500000
14			14		100000	14			113	500000
15					100000	16			117	500000
21					100000	17			1	500000
21					100000	22			118	500000
24					100000	23			119	500000
1			16		100000	24			120	500000
2					100000	25			121	500000
4					100000	26			122	500000
6					100000	27			123	500000
11					100000	10			124	500000
14			10		100000	11			125	500000
15					100000	12			126	500000
15					100000	13			127	500000
15			17		100000	14			128	500000
17					100000	21			129	500000
20					100000	22			130	500000
25					100000	23			131	500000
27					100000	24			132	500000
					100000				133	500000
					100000				134	500000
					100000				135	500000
					100000				136	500000
					100000				137	500000
					100000				138	500000
					100000				139	500000
					100000				140	500000
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					100000				142	500000
					100000				143	500000
					100000				144	500000
					100000				145	500000
					100000				146	500000
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Thomas A. Edison (Lenny's boy's father)

1910				1911			
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
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1409	1410	1411	14				

Thomas A. Edison (Glenmont Notes)

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	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Mar.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
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Thos. A. Edison Sales Notes

[illegible]

Thos. A. Edison's Gt. Pales Notes

Nov.		Dec.		Jan.		Feb.		Mar.	
21	Nov. Pay	10	500000	24	Nov. G.D.	6	500000	21	Nov. G.D.
24	"	"	500000	27	"	7	500000	24	"
1	"	12	500000	30	"	8	500000	27	"
2	"	"	500000	31	"	9	500000	30	"
4	"	"	500000	1	"	10	500000	31	"
6	"	"	500000	2	"	11	500000	1	"
11	"	"	500000	3	"	12	500000	2	"
13	"	"	500000	4	"	13	500000	3	"
15	"	"	500000	5	"	14	500000	4	"
18	"	"	1000000	6	"	15	500000	5	"
18	"	"	500000	7	"	16	500000	6	"
20	"	"	500000	8	"	17	500000	7	"
20	"	"	500000	9	"	18	500000	8	"
25	"	"	1000000	10	"	19	500000	9	"
25	"	"	500000	11	"	20	500000	10	"
2	"	14	500000	12	"	21	500000	11	"
3	"	"	500000	13	"	22	500000	12	"
5	"	"	500000	14	"	23	500000	13	"
8	"	"	500000	15	"	24	500000	14	"
9	"	"	500000	16	"	25	500000	15	"
9	"	"	500000	17	"	26	500000	16	"
10	"	"	500000	18	"	27	500000	17	"
16	"	"	500000	19	"	28	500000	18	"
19	"	"	500000	20	"	29	500000	19	"
22	"	"	500000	21	"	30	500000	20	"
23	"	"	500000	22	"	31	500000	21	"
24	"	"	500000	23	"	1	500000	22	"
29	"	"	500000	24	"	2	500000	23	"
30	"	"	500000	25	"	3	500000	24	"
31	"	"	500000	26	"	4	500000	25	"
31	"	"	500000	27	"	5	500000	26	"
31	"	"	500000	28	"	6	500000	27	"
31	"	"	500000	29	"	7	500000	28	"
31	"	"	500000	30	"	8	500000	29	"
31	"	"	500000	31	"	9	500000	30	"
31	"	"	500000	1	"	10	500000	31	"
31	"	"	500000	2	"	11	500000	1	"
31	"	"	500000	3	"	12	500000	2	"
31	"	"	500000	4	"	13	500000	3	"
31	"	"	500000	5	"	14	500000	4	"
31	"	"	500000	6	"	15	500000	5	"
31	"	"	500000	7	"	16	500000	6	"
31	"	"	500000	8	"	17	500000	7	"
31	"	"	500000	9	"	18	500000	8	"
31	"	"	500000	10	"	19	500000	9	"
31	"	"	500000	11	"	20	500000	10	"
31	"	"	500000	12	"	21	50		

Thomas A. Edison C^y Sales Notes

March 21	Bills Pay 16	50000.00	March 22	Cash Div 4	50000.00
" 1	" " "	50000.00	" 28	" " "	50000.00
" 7	" " "	50000.00	" 30	" " 106.	50000.00
Apr. 1	" " 17	50000.00	Apr. 2	" " 108.	50000.00
" 2	" " "	50000.00	" 8	" " 110.	50000.00
" 4	" " "	50000.00	" 5	" " 107.	50000.00
" 6	" " "	50000.00	" 9	" " 111.	50000.00
" 11	" " "	50000.00	" 12	" " 112.	50000.00
" 13	" " "	50000.00	" 16	" " 113.	50000.00
" 15	" " "	50000.00	" 18	" " 114.	50000.00
" 18	" " "	100000.00	" 19	" " 115.	100000.00
" 19	" " "	50000.00	" 20	" " 116.	50000.00
" 26	" " "	50000.00	" 28	" " 117.	50000.00
" 28	" " "	50000.00	" 46	" " 118.	100000.00
" 26	" " "	50000.00	" 48	" " 119.	50000.00
May 1	" " 19	50000.00	May 3	" " 122.	50000.00
" 2	" " "	50000.00	" "	" " "	50000.00
" 3	" " "	50000.00	" "	" " "	50000.00
" 6	" " "	50000.00	" 7	" " 123.	50000.00
" 7	" " "	50000.00	" 8	" " 124.	50000.00
" 8	" " "	50000.00	" 10	" " 126.	50000.00
" 9	" " "	50000.00	" 13	" " 127.	50000.00
" 15	" " "	50000.00	" 16	" " 129.	50000.00
" 16	" " "	50000.00	" 17	" " 130.	50000.00
" 20	" " "	50000.00	" 21	" " 132.	50000.00
" 21	" " "	50000.00	" 28	" " 133.	50000.00
" 23	" " "	50000.00	" 29	" " 134.	50000.00
" 27	" " "	50000.00	June 1	" " 1.	50000.00
June 3	" " 21	50000.00	" 4	" " 2.	50000.00
" 6	" " "	50000.00	" 5	" " 3.	50000.00
" 10	" " "	50000.00	" 7	" " 4.	50000.00
" 13	" " "	50000.00	" 11	" " 5.	50000.00
" 17	" " "	50000.00	" 14	" " 9.	50000.00
" "	" " "	50000.00	" 18	" " 10.	50000.00
" 20	" " "	50000.00	" 21	" " 12.	50000.00
" 22	" " "	50000.00	" 24	" " 13.	50000.00
" 24	" " "	50000.00	" 27	" " 14.	50000.00
July 1	" " 22	50000.00	July 2	" " "	50000.00
" 2	" " "	50000.00	" 9	" " 18.	50000.00
" 6	" " "	50000.00	" "	" " "	50000.00
" 9	" " "	100000.00	" "	" " "	50000.00
" 11	" " "	50000.00	" "	" " 10.	50000.00
" 15	" " "	50000.00	" 13	" " 22.	50000.00
" "	" " "	50000.00	" 16	" " 20.	50000.00
		250000.00			250000.00

Thos. W. Edison C^y Sales Notes

1914		1914		
July	15 Bills Pay 27	50,000.00	July 14 C. & D 24	50,000.00
"	20 " " 27	50,000.00	" 22 " " 26	50,000.00
"	22 " " 27	50,000.00	" 23 " " 27	50,000.00
"	24 " " 27	50,000.00	" 24 " " 27	50,000.00
Aug	19 " " 27	50,000.00	" 29 " " 32	50,000.00
"	1 " " 23	50,000.00	" 2 " " 32	50,000.00
"	2 " " 27	50,000.00	" 3 " " 33	50,000.00
"	5 " " 27	50,000.00	" 7 " " 35	50,000.00
"	6 " " 27	50,000.00	" 8 " " 40	50,000.00
"	12 " " 27	50,000.00	" 10 " " 40	50,000.00
"	13 " " 27	50,000.00	" 16 " " 42	50,000.00
"	15 " " 27	50,000.00	" " " 43	50,000.00
"	19 " " 27	100,000.00	" " " 43	100,000.00
"	19 " " 27	50,000.00	" 21 " " 44	50,000.00
"	20 " " 27	50,000.00	" " " 45	50,000.00
"	21 " " 27	50,000.00	" 22 " " 45	50,000.00
"	26 " " 27	100,000.00	" " " 47	50,000.00
"	26 " " 27	50,000.00	" 27 " " 47	100,000.00
"	15 " " 27	50,000.00	" 28 " " 49	50,000.00
Est.	10 " " 78	50,000.00	" 28 " " 50	50,000.00
"	20 " " 27	50,000.00	" " " 51	50,000.00
"	21 " " 27	50,000.00	" 6 " " 52	50,000.00
"	3 " " 27	50,000.00	" 10 " " 54	50,000.00
"	5 " " 27	50,000.00	" 11 " " 55	50,000.00
"	7 " " 27	50,000.00	" " " 55	50,000.00
"	9 " " 27	50,000.00	" 17 " " 58	50,000.00
"	9 " " 27	50,000.00	" 20 " " 60	50,000.00
"	16 " " 27	50,000.00	" 25 " " 63	50,000.00
"	16 " " 27	50,000.00	" 4 " " 64	50,000.00
"	17 " " 27	50,000.00	" 28 " " 64	50,000.00
"	21 " " 27	50,000.00	" " " 65	50,000.00
"	23 " " 27	50,000.00	" 30 " " 65	50,000.00
Oct	2 " " 27	50,000.00	" 1 " " 66	50,000.00
"	3 " " 27	50,000.00	" 3 " " 67	50,000.00
"	7 " " 27	50,000.00	" 8 " " 69	50,000.00
"	9 " " 27	50,000.00	" 9 " " 70	50,000.00
"	9 " " 27	50,000.00	" 10 " " 71	50,000.00
"	14 " " 27	50,000.00	" 15 " " 73	50,000.00
"	16 " " 27	50,000.00	" 18 " " 78	50,000.00
"	17 " " 27	50,000.00	" " " 78	50,000.00
"	21 " " 27	50,000.00	" 21 <i>Est</i> 79	100,000.00
"	22 " " 27	50,000.00	" 28 C. & D 81	50,000.00
"	24 " " 27	50,000.00	" <i>Bills Pay</i> 82	50,000.00
"	28 " " 27	50,000.00	" C. & D 82	50,000.00
"	30 " " 26	50,000.00	" 24 " 84	50,000.00
"	C. & D 26	79	" 24 " 84	50,000.00
"	30 " 26 26	82	" <i>Est & D</i> 169	100,000.00
				260,000.00

Nov. (V Edition) (St. Sales Notes)

Nov.	Bees Pay	29	5000.00	Nov.	G. P. D.	36	5000.00
2	"	"	5000.00	5	"	"	5000.00
6	"	"	5000.00	8	"	"	5000.00
7	"	"	5000.00	"	"	"	5000.00
9	"	"	5000.00	11	"	"	5000.00
11	"	"	5000.00	13	"	"	5000.00
14	"	"	5000.00	15	"	"	5000.00
15	"	"	5000.00	17	"	"	5000.00
20	"	"	5000.00	21	"	"	5000.00
21	"	"	5000.00	26	"	"	5000.00
28	"	"	5000.00	"	"	"	5000.00
Dec.	"	"	5000.00	Dec.	"	"	5000.00
2	"	"	5000.00	3	"	"	5000.00
4	"	"	5000.00	"	"	"	5000.00
6	"	"	5000.00	6	"	"	5000.00
13	"	"	5000.00	10	"	"	5000.00
13	"	"	5000.00	13	"	"	5000.00
16	"	"	5000.00	14	"	"	5000.00
17	"	"	5000.00	18	"	"	5000.00
19	"	"	5000.00	19	"	"	5000.00
20	"	"	5000.00	21	"	"	5000.00
21	"	"	5000.00	23	"	"	5000.00
25	"	"	5000.00	24	"	"	5000.00
26	"	"	5000.00	27	"	"	5000.00
			5000.00	28	"	"	5000.00
			135000.00				135000.00

Paul Rose and

1890	7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
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Pay Roll 11/10

Jan	19	"	376.18	93.	324.494	June 30	Land	222.	4720.057
	20	"	376.44	"	324.494	July 31	"	232.	3909.850
July	8	"	377.77	101.	202.311	Aug 31	"	11.	4525.820
	10	"	377.77	"	324.494	Sept 30	"	20	4033.506
	18	"	377.81	104.	168.00	Oct 31	"	35.	4444.487
	25	"	377.77	107.	168.00	Nov 30	"	49.	3945.591
	"	"	377.77	"	168.00	Dec 31	"	62.	3268.407
Aug.	3	"	330.11	1.	201.145	Jan 31	"	73.	3585.853
	4	"	330.00	2.	212.778	Feb 29	"	82.	3077.244
	18	"	330.00	10.	375.564	Mar 30	"	92.	3087.668
	22	"	330.00	11.	392.886	Apr 30	"	102.	3087.668
Sept.	5	"	335.22	15.	201.725	May 31	"	115.	3087.668
	7	"	335.76	20	30	June 30	"	120.	3087.668
	16	"	336.1	17.	168.00				
Oct.	5	"	337.79	34.	179.100				
	"	"	337.79	4.	185.208				
	7	"	338.00	35.	168.00				
	20	"	340.8	41.	184.735				
	"	"	340.19	"	184.735				
Nov.	4	"	341.44	47.	201.151				
	8	"	341.60	49.	213.91.99				
	16	"	341.88	52.	188.00.9				
	26	"	341.92	54.	188.00.9				
Dec.	2	"	340.61	53.	136.253				
	5	"	340.62	57.	169.52.91				
	21	"	347.54	67.	182.284				
Jan.	5	"	349.8	74.	144.621.3				
Feb.	6	"	350.86	79.	144.621.3				
	19	"	353.46	87.	144.621.3				
	26	"	355.89	92.	144.621.3				
Mar.	6	"	356.71	99.	144.621.3				
	19	"	358.72	103.	144.621.3				
	20	"	377.78	"	144.621.3				
Apr.	4	"	360.01	109.	131.958				
	18	"	360.25	"	144.621.3				
	18	"	360.97	114.	214.20.9				
May	3	"	360.97	"	214.20.9				
	6	"	361.2	122.	216.51.4				
	18	"	361.16	128.	216.51.4				
	26	"	365.46	130.	203.76.1				
June	21	"	364.72	130.	216.51.4				
	4	"	364.41	1	203.76.1				
	6	"	364.45	1	216.51.4				
	21	"	364.71	10.	203.76.1				
	"	"	367.18	11.	203.76.1				
July	3	"	367.94	15.	216.51.4				
	5	"	367.94	16.	216.51.4				

4496.17.70

Pay Roll 11/10

July	18	"	370.00	24.	2090.855	Self 31	Land	139.	4702.008
	22	"	371.14	26.	1930.924	"	"	"	276.65
Aug.	8	"	371.74	32.	2838.58	Aug	"	150.	371.457
	6	"	372.08	34.	2305.766	Sept 30	"	161.	366.881
	20	"	374.00	44.	2440.322	Oct 31	"	172.	366.881
Sept.	4	"	376.70	50.	2392.442	Nov 30	"	183.	366.881
	5	"	376.42	52.	2396.143	Dec 31	"	197.	366.881
	18	"	377.53	59.	2733.001				
	21	"	377.56	60.	2733.001				
Oct.	4	"	379.41	64.	2458.381				
	18	"	382.06	78.	2442.02				
	21	"	382.79	79.	2351.289				
Nov.	5	"	384.07	87.	24008.10				
	19	"	386.69	96.	2130.86				
	21	"	387.77	99.	2304.872				
Dec.	5	"	389.19	104.	2520.811				
	19	"	391.64	112.	2466.34				
	31	"	391.64	271.	2466.34				
					271.0004				
					271.0004				

271.0004

Cement Sales

1911	4	3	Shady	45.	45.66	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.	14.00	191	1	3	Shady	14.
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Cement Sales.

Jan	10	Ami forward	41	1984	Jan	11	on forward	163	886
	11	Emmels Machine Co 165		2550		8	branch	26	38
		• Royal Smith Co		3000		31		61	1074
		• Royal Smith Co		1529	Feb	7	Branch Co	172	250
		• Gold Cutter & Smith Co		700		10	Fit Mfg	"	112
	15	• J. H. & W. H. Co		2025		28	5056	1074	112
		• Royal Smith Co 165		600			48197	48197	48197
	21	• Smith Co		5152	Mar	31	25877	119	7074
	26	• J. H. & W. H. Co 166		1011			5642	210	2505
	31	• J. H. & W. H. Co		250					
Feb		• A. & B. Co 171		16200					
		• J. H. & W. H. Co 174		5812					
		• J. H. & W. H. Co		4500					
		• J. H. & W. H. Co		75					
	23	• J. H. & W. H. Co		200					
Mar		• J. H. & W. H. Co 175		10665					
	5	• J. H. & W. H. Co 179		2052					
		• J. H. & W. H. Co		3500					
		• J. H. & W. H. Co		18195					
	6	• J. H. & W. H. Co 180		1011					
	7	• J. H. & W. H. Co		1125					
		• J. H. & W. H. Co		5780					
		• J. H. & W. H. Co		2705					
	10	• J. H. & W. H. Co 182		1567					
		• J. H. & W. H. Co		500					
	20	• J. H. & W. H. Co 185		1011					
		• J. H. & W. H. Co		2500					
	25	• J. H. & W. H. Co 185		2045					
	30	• J. H. & W. H. Co		450					
		• J. H. & W. H. Co 186		6000					
	31	• J. H. & W. H. Co		1300					
		• J. H. & W. H. Co		18					
		• J. H. & W. H. Co		1737					
		• J. H. & W. H. Co		4338					
Apr	6	• J. H. & W. H. Co 190		500					
	10	• J. H. & W. H. Co		2755					
		• J. H. & W. H. Co		1200					
		• J. H. & W. H. Co		75					
		• J. H. & W. H. Co		2100					
	11	• J. H. & W. H. Co		2792					
		• J. H. & W. H. Co 192		8138					
	15	• J. H. & W. H. Co 193		1898					
	17	• J. H. & W. H. Co		3320					
		• J. H. & W. H. Co		9887					
		• J. H. & W. H. Co 194		500					
	19	• J. H. & W. H. Co		1300					

Cement Sales

[illegible]

Cement Sales

July	19	last forwarded	35	0683	July	19	last forwarded	78	607.66
	20	S. P. Miller 299	51	537		15	251	76	11
	21	W. J. Clark 299	50	73		31	S. P. Miller	149	299.227
	25	Summ 2991	15	66		24	464	11	6274
		Q. B. M. Hunt 2992		500	Aug	5	5010	2	72
	31	Orlando Bros 2999	251	502		8	5009	2	600
	29	Summ		9960		29	5094	9	600
Aug	5	" 515-757-806	1	1363		31	S. P. Miller	187	7364.26
	"	" 515-757-806	1	1427		"	26758	98	96
	"	" 515-757-806	2	2500	Sept	7	Summ	14	1100
	"	" 500562	"	40		22	5150	16	36
	8	G. D. Meyer 5011	3	600		"	5160	17	98
	"	" 5012	"	1441		"	5111	14	175
	"	" 5014	"	14190		30	S. P. Miller	154	17549
	"	" 5016	"	400		"	26748	148	301
	"	" 5018	"	2000				148	301
	9	Summ 5019	4	10706				148	301
	16	Summ 5020	5	1375				148	301
	18	Summ 5021	6	1292				148	301
	19	Summ 5022	7	7400				148	301
	22	Summ 5023	7	7501				148	301
	25	Summ 5024	8	2255				148	301
	28	Summ 5025	8	874				148	301
	31	Summ 5026	10	4917				148	301
Sept	9	Summ 5110	14	735				148	301
	"	" 5112	"	700				148	301
	"	" 5114	"	1000				148	301
	"	" 5116	"	957				148	301
	11	Summ 5117	15	50500				148	301
	18	S. P. Miller 5118	16	4080				148	301
	22	Summ 5119	"	50				148	301
	"	" 5121	"	13154				148	301
	"	" 5123	"	5390				148	301
	"	" 5125	"	500				148	301
	28	Summ 5126	17	5000				148	301
	31	Summ 5127	19	25250				148	301
Oct	5	Summ 5128	"	848				148	301
	6	Summ 5129	25	1000				148	301
	"	" 5131	24	2960				148	301
	"	" 5133	"	713				148	301
	"	" 5135	"	1210				148	301
	"	" 5137	"	10200				148	301
	"	" 5139	"	875				148	301
	"	" 5141	"	760				148	301
	"	" 5143	"	487				148	301
	"	" 5145	"	500				148	301
	13	Summ 5146	28	232				148	301

Cement Sales

Oct	13	last forwarded	62	751	Oct	13	last forwarded	12	5006
		" 5148	28	1200		24	" 5149	24	5360
		" 5150	29	3910		14	" 5151	28	7045
		" 5152	29	487		31	" 5152	28	7045
		" 5153	29	12855		"	" 5153	28	7045
		" 5154	29	7000		"	" 5154	28	7045
		" 5155	29	658		"	" 5155	28	7045
		" 5156	29	105		"	" 5156	28	7045
		" 5157	29	50		"	" 5157	28	7045
		" 5158	29	1000		"	" 5158	28	7045
		" 5159	29	1135		"	" 5159	28	7045
		" 5160	29	148		"	" 5160	28	7045
		" 5161	29	3590		"	" 5161	28	7045
		" 5162	29	3250		"	" 5162	28	7045
		" 5163	29	1400		"	" 5163	28	7045
		" 5164	29	17050		"	" 5164	28	7045
		" 5165	29	2000		"	" 5165	28	7045
		" 5166	29	750		"	" 5166	28	7045
		" 5167	29	1500		"	" 5167	28	7045
		" 5168	29	1000		"	" 5168	28	7045
		" 5169	29	580		"	" 5169	28	7045
		" 5170	29	15293		"	" 5170	28	7045
		" 5171	29	550		"	" 5171	28	7045
		" 5172	29	150		"	" 5172	28	7045
		" 5173	29	800		"	" 5173	28	7045
		" 5174	29	700		"	" 5174	28	7045
		" 5175	29	50		"	" 5175	28	7045
		" 5176	29	870		"	" 5176	28	7045
		" 5177	29	850		"	" 5177	28	7045
		" 5178	29	200		"	" 5178	28	7045
		" 5179	29	800		"	" 5179	28	7045
		" 5180	29	1146		"	" 5180	28	7045
		" 5181	29	2750		"	" 5181	28	7045
		" 5182	29	4817		"	" 5182	28	7045
		" 5183	29	1100		"	" 5183	28	7045
		" 5184	29	139		"	" 5184	28	7045
		" 5185	29	5544		"	" 5185	28	7045
		" 5186	29	500		"	" 5186	28	7045
		" 5187	29	600		"	" 5187	28	7045
		" 5188	29	900		"	" 5188	28	7045
		" 5189	29	239		"	" 5189	28	7045
		" 5190	29	5491		"	" 5190	28	7045
		" 5191	29	200		"	" 5191	28	7045
		" 5192	29	1350		"	" 5192	28	7045
		" 5193	29	2600		"	" 5193	28	7045
		" 5194	29	500		"	" 5194	28	7045
		" 5195	29	17831		"	" 5195	28	7045
		" 5196	29	750		"	" 5196	28	7045
		" 5197	29	751274		"	" 5197	28	7045

Cement Sales

1911	1911
Dec. 27	Dec. 27
28 Auto. Supply Co. 34.58	50
30 P. L. 1533, 27.8	65
1133.192	1134.301.86
14999008	1099657.68
60	261.1
53262890	34612.46
14344	30.50
1553213	112430.125

Blackburn Street Street Expenses

1910	1910
Apr. 24	Apr. 17
Apr. 10	Apr. 30
May 4	May 17
May 9	May 24
May 21	May 31
Jun 7	Jun 14
Aug. 17	Aug. 24
Oct. 8	Oct. 15
Nov. 22	Nov. 29
Nov. 20	Nov. 27
Jan. 11	Jan. 18
Jan. 17	Jan. 24
Jan. 31	Jan. 31
Feb. 31	Feb. 31
Feb. 21	Feb. 28
Mar. 17	Mar. 24
Mar. 31	Mar. 31
Apr. 19	Apr. 26
Apr. 24	Apr. 31
Apr. 30	Apr. 30
May 5	May 12
May 29	May 31
May 31	May 31
June 30	June 30
July 31	July 31
Aug. 8	Aug. 15
Aug. 25	Aug. 31
Sept. 30	Sept. 30
Oct. 24	Oct. 31
Oct. 31	Oct. 31
Nov. 15	Nov. 22
Nov. 27	Nov. 30
Dec. 30	Dec. 31
Jan. 9	Jan. 16
Jan. 26	Jan. 31
Feb. 31	Feb. 31
Mar. 31	Mar. 31
Apr. 30	Apr. 30
May 31	May 31
Jun 30	Jun 30
Jul 31	Jul 31
Aug 31	Aug 31
Sep 30	Sep 30
Oct 31	Oct 31
Nov 30	Nov 30
Dec 31	Dec 31
1911	1911
Jan. 9	Jan. 16
Jan. 26	Jan. 31
Feb. 31	Feb. 31
Mar. 31	Mar. 31
Apr. 30	Apr. 30
May 31	May 31
Jun 30	Jun 30
Jul 31	Jul 31
Aug 31	Aug 31
Sep 30	Sep 30
Oct 31	Oct 31
Nov 30	Nov 30
Dec 31	Dec 31

1910
Jan. 17
Apr. 30
May 17
May 24
May 31
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1910
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1910
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Nov 14
Nov 24
Nov 30
Dec 14
Dec 24
Dec 31

Cost of Sales

1912	Jan 31	21096.42	568.73	11952.81	1911	Dec 31	Journal	300.110363667
	"	7882.14	"	1452.000				
	Feb 29	5565.12	"	132.1434				
	"	3367.4	"	565.83				
	Mar 30	4443.6	"	2609.13				
	"	16120.4	"	574.93				
	Apr 30	19120.75	"	578.102				
	"	1244.34	"	103				
	May 31	17075.4	"	115				
	"	42371.34	"	58.116				
	June 30	27650.4	"	116				
	"	156806.34	"	575				
	July 31	21558.4	"	139				
	"	1975.99	"	585				
	Aug	"	24160.34	100				
	"	18502.7	"	589				
	Sept 30	21706.34	"	161				
	"	17782.3	"	589.164				
	Oct 31	23338.4	"	173				
	"	11164.4	"	575				
	Nov 30	27549.4	"	183				
	"	162.4274	"	611				
	Dec 31	28167.4	"	177				
	"	116.166.4	"	631				
				110353667				

110353667

Cement Sales

1912	Dec 31	P. & L.	1867.045	700	171	170354	1912	Jan 30	28975.103	1890502
								Feb 29	39442.111	2524524
								Mar 30	77700.427	5842587
								"	10501.362	7266094
								Apr 30	1495	15
								"	27677	
								"	27684	
								"	155314856	188087122
								"	106716	18310
								"	106716	18310
								"	159628185	120926254
								"	114	300
								"	25094	15549
								"	222794	15549
								"	159225	17618
								"	207	170
								"	1790674	6128328
								"	28501	190425
								"	21421151	13330
								"	149	6887
								"	209747	33
								"	149	13539455
								"	28509	20
								"	149	18127
								"	197773	65
								"	29308	1930478
								"	2774461	75
								"	2173463	96
								"	29346	14881817
								"	284479	18200
								"	1602121	173
								"	28527	1367576
								"	29876	18154
								"	187	16340
								"	2265779	145
								"	186245	14766612
								"	186245	14766612

1867.045

171170354

Teuchocypus Paper Barges

1912
Dec 31 Prof. S. Low 200 264.3 May 31 Sales 238.881 285 264.3

1910
Jan 31 Journal (2000) 530 26.7
Feb 7 " 550 26.8
May 31 " 90 28.59

1911
Jan 31 8000 108. 23.160 Aug 31 Sales 2100 780 205.20
Aug 31 5000 117. 275.88 Sept 30 " 3000 780 265.63
Sept 30 298 845 138.84 Oct 31 " 295 281 288.92
Oct 31 130 375 122.8 Nov 30 " 175 114 140.40
Nov 30 110 325 122.8 Dec 31 " 172 19.12 140.40
Dec 31 118 325 122.8 19.12 140.40

1912
Jan 31 1972 140.40 Jan 31 Sales 600 281 145.00
Feb 31 822 375 1370 282 122.75
Feb 28 789 " 591.72 Mar 23 Chalk Sales 720 181 720.00
Mar 31 29000 176 203.000 31 Sales 17295 283 129.14
Apr 31 99 325 21.14 Apr 30 " 17717 285 128.14
Apr 30 1583 " 21.14 May 24 " 10 787 175
May 31 9460 199 24.410 31 Sales 14297 279 162.22
May 31 1920 526 24.410 June 30 " 3640 288 162.22
June 31 12464 212 105.914 July 31 " 6580 287 162.22
July 31 9775 527 105.914 Aug 31 " 24300 297 162.22
Aug 31 5349 " 105.914 Sept 30 " 19850 295 162.22
Sept 31 5400 590 162.22 Oct 31 " 6460 294 162.22
Oct 31 5000 11 162.22 Nov 29 " 5747 293 162.22
Nov 30 5761 391 162.22 Dec 31 " 190 49 162.22
Dec 31 15015 21 162.22 Dec 31 Sales 1640 293 162.22
Dec 31 16336 591 162.22 30 Dec 31 " 6178 60 162.22
Dec 31 9990 392 162.22 " 6178 60 162.22
Dec 31 34370 893 162.22 " 6178 60 162.22
Dec 31 48745 64 162.22 " 6178 60 162.22
Dec 31 181750 162.22 " 6178 60 162.22

1913
Jan 31 61754 Jan 30 Sales 3410 292 255.75
Feb 31 12081 94 2350 1 17.024
Feb 29 5507 " 33970 790 254.400
Mar 31 1325 394 254.400
Apr 31 3466 395 254.400
May 31 4162 " 254.400
June 31 4576 396 254.400
July 31 4576 396 254.400
Aug 31 4576 396 254.400
Sept 31 4576 396 254.400
Oct 31 4576 396 254.400
Nov 31 4576 396 254.400
Dec 31 4576 396 254.400

Inl. Wdly. etc. on Sales

Aug 3 Balance	12641.32	Aug 9 Journal Pay	4.	1352.
5 Loyal Bank	2	11	2869	
8 Loyal	15350	16 W. St. & Co.	5.	17928
9 Loyal Cash Co	29375	6.	11952	
10 W. St. & Co	25785	31 Sales Pay	26.	1045961
16 Loyal Bank	14448	Sept 18	297.	20700
18 Loyal Cash Co	5340	27 Loyal	16.	5045
19 Loyal Bank Co	27500	30 Sales Pay	18.	900
23	39218	31	47.	5946322
24 Chas. G. Murray	16200	Oct 18	295.	18635
25 Loyal Bank	7584	18 W. St. & Co.	29.	137449
29	66457	24	31.	5976
31 Loyal Bank Co	4227	31	33.	41852
Sept 7 Loyal	648255	" Loyal Sales Pay	69.	769448
9 Loyal Bank	61325	31	24.	11515
10 W. St. & Co	15375	Nov 5 W. St. & Co.	35.	11952
11 W. St. & Co	25800	22	45.	53784
12 Loyal Bank	59415	23	46.	11952
13 Loyal Bank Co	2500	30 Loyal Sales Pay	85.	344444
14 Chas. G. Murray	14750	Dec 14 W. St. & Co.	54.	76685
30 Loyal	14676	30 Loyal Sales Pay	96.	437980
Oct 1 Loyal Bank	252400	" Balance		855230
6 Loyal Bank Co	36000			
7 Loyal Bank Co	98693			
8 W. St. & Co	900			
9 Loyal Bank Co	5000			
10 Chas. G. Murray	36000			
13 Loyal	59986			
14 Loyal Bank Co	31873			
19	30			
31	34			
Nov 1 Loyal Bank Co	35			
4 Loyal Bank	35			
10 Loyal Bank	38			
15 Loyal Bank	39			
16 Loyal Bank	41			
17 Loyal Bank	42			
18 Loyal Bank	43			
21 Loyal Bank Co	44			
25	46			
30	49			
Dec 9	52			
11 Loyal Bank	56			
21 Loyal Bank Co	57			
27 Loyal Bank Co	58			

Inl. Wdly. etc. on Sales

Dec 30 Balance	855230	Dec 30 Loyal Bank	62	241904
W. St. & Co	61	30 Journal	65	128301
Loyal Bank	63	30 Balance		1270205
Jan 1 Balance	900000	Jan 31 Loyal Bank	72	78819
5 Loyal	29743	Feb 20 Loyal Bank	50	1200
9 Loyal Bank	11783	29 Loyal Bank	51	78819
"	48825	Mar 12 Loyal Bank	57	980
		13 Loyal Bank	58	185
		29 Loyal Bank	91	78819
		Apr 30	100	78819
		May 31	103	78819
		June 29	124	78819
		July 9 Loyal Bank	131	78819
		31 Loyal Bank	139	78819
		Aug 31	148	78819
		Sept 30	160	78819
		Oct 30	170	78819
		Nov 30	174	78819
		Dec 31	178	78819
		31 Loyal #3	205	78819
				745326

Preparing Freight 1st

1891			1892						
Dec 30	Sal. Village	62.	241904	Jan 30	Sal. Pige	103.	262249		
Nov 21	Dr. Mags. Baiting	89.	175723		Sal. East	292.	101125		
30	Dr. Mags.	93.	175723	Feb 29	"	"	111250		
18	Dr. Mags.	89.	175723	"	"	"	673825		
30	Dr. Mags.	162.	175723	Mar 30	"	"	790.	21975	
May 29	Dr. Mags.	112.	175723	"	"	"	171.	202555	
31	Dr. Mags.	115.	175723	Apr 4	"	"	95.	40	
June 30	"	176.	175723	30	"	"	156.	413652	
July 31	"	189.	175723	"	Sal. East	287.	38815		
Dec 31	Dr. Mags. Baiting	142.	175723	May 31	Dr. Mags. Baiting	119.	6565		
1891	Work	150.	175723	"	Sal. Pige	185.	627609		
Sept 30	"	164.	175723	"	Sal. East	285.	10156		
Oct 31	"	172.	175723	June 29	"	"	217.	719306	
Nov 30	"	184.	175723	"	Sal. East	284.	2125		
Dec 31	"	198.	175723	July 31	"	"	287.	578	
				"	"	"	248.	637671	
				Aug 31	"	"	93.	859010	
				"	"	"	"	18440	
				Sept 30	"	"	8.	74335	
				"	"	"	65.	596903	
				Oct 31	"	"	96.	774110	
				"	"	"	10.	16825	
				Nov 30	"	"	73.	740385	
				"	"	"	11.	6946	
				Dec 31	"	"	12.	3893	
				"	"	"	148.	944204	
				Journal	"	"	200.	74615371	
				Balance - Sal.	"	"	100.	1000000	
								7155595	

Advertising

1911									
July	15	to last Aug 21/10	49.	207	Dec	10	of Cash	125	112.50
	31	Sales Reg.	170.	170.	Dec	10	"	11.	11.00
		" "	100.	375.	Dec	31	Refund	155	255.25
		" Sales off Reg.	39.	888.88			Journal	156	411.457
Aug	4	" "	105.	28.50					
	14	" "	105.	400					
	14	" "	58.	477					
	28	Sales Regular	177.	390.614					
	"	" off "	41.	2889.86					
Nov	10	" "	17.	1000					
	31	Sales Regular	197.	451.424					
	"	" off "	40.	365.612					
	"	" "	69.	454.872					
Apr	30	Sales Reg.	217.	433.877					
	"	" "	87.	6258					
	"	Sales off Reg.	45.	3854.87					
May	31	Sales Reg.	709.	355.744					
	"	Sales off Reg.	47.	2670.60					
	"	" "	92.	22444					
June	7	" "	91.	500					
	30	Sales Reg.	758.	1740.145					
	"	" off "	47.	2172.09					
	"	" "	77.	1167.56					
July	30	Sales Reg.	277.	1771.174					
	"	" off "	50.	2260.07					
	31	Sales Reg.	108.	2244.78					
Aug	31	Sales Reg.	29.	2001.58					
	"	" off "	51.	2029.08					
	"	" "	116.	2445.66					
Sept	27	Sales Reg.	166.	355					
	30	Sales Reg.	53.	244.98					
	"	" "	122.	5940					
	"	Sales off	50.	2384.44					
Oct	31	" Reg.	77.	2104.258					
	"	Sales off	55.	2607.54					
	"	" "	125.	3452.72					
Nov	5	" "	128.	1000					
	30	Sales Reg.	94.	305.292					
	"	" "	144.	124.11					
	"	Sales off Nov	57.	3483.994					
Dec	31	Sales Reg.	102.	355.693					
	"	Sales Off Nov	55.	344.15					
	"	" "	154.	151.77					
				41185.19					
Jan 31	31	Works	169.	237.12	Feb 28	Balance		41185.19	
	31	Sales Off Nov	61.	26488.14				39586.1	
Feb	10	Journal	172.	2012.25					
	28	Sales Off Nov	62.	1528.98					
				3033.63				39586.5	

Advertising

Feb 28	Balance	39758.63	Mar 21	Ans. news & adv	183.	14.000
"	Drinks	176	Dec 30	P. H. L.	65.	1403.1170
Mar 31	"	188.				
"	Sal. Office	65.				
Apr 19	Journal	194.				
"	W. S. Co.	196.				
25	"	114				
30	Sal. Off. Reg.	44				
"	Drinks	199				
May 31	Sal. Off. Reg.	65				
"	Drinks	212.				
June 28	C. Meyer	220.				
30	Drinks	222.				
"	Sal. Off. Reg.	66.				
July 31	Drinks	235.				
"	Sal. Off. Reg.	67.				
Aug 31	"	68				
Sept 30	Sal. Reg.	49.				
"	Sal. Off. Reg.	69.				
"	Drinks	21.				
Oct 31	Sal. Reg.	69.				
"	Nov	70.				
"	Drinks	35.				
Nov 30	Sal. Off. Reg.	71.				
"	Drinks	49.				
Dec 30	Sal. Off. Reg.	72.				
Jan 31	Sal. Off. Reg.	73.				
Feb 29	"	74.				
Mar 2	Sal. Reg.	84.				
30	Sal. Off. Reg.	75.				
"	Drinks	93.				
Apr 2	Journal	95.				
9	W. S. Co.	97.				
30	Sal. Off. Reg.	76.				
"	Drinks	102.				
May 31	Sal. Off. Reg.	77.				
"	Drinks	115.				
June 30	Sal. Off. Reg.	78.				
"	Drinks	116.				
July 31	Sal. Off. Reg.	79.				
"	Drinks	139.				
Aug 31	Sal. Off. Reg.	80.				
"	Drinks	150.				
Sept 30	Sal. Off. Reg.	81.				
"	Drinks	143.				
Oct 31	Sal. Off. Reg.	82.				
"	Drinks	172.				

Advertising

Oct 31	Balance	708.	Dec 31	Journal	108.	800.967
Nov 30	Sal. Off. Reg.	83.				
"	Drinks	184.				
Dec 31	Sal. Off. Reg.	84.				
"	Drinks	195.				

800.967

Commercial and Sales

1910			53.	51.91	1910			56.	789.53
Jan	31	P. Res. & L.	53.	51.91	Dec. 31	Journal	56.	789.53	
Feb	28	"	59.	151.52					
Mar.	31	"	61.	384.97					
Apr.	30	"	60.	221.36					
May	31	"	90.	265.46					
				989.53					989.53

Newark Sales Office

1911					1910				
Oct. 31	Sal. Off. Rep.	70.	924.46	Dec. 30	Journal	65.	1724.77		
Nov. 30	" " " "	71.	823.61						
Dec. 30	" " " "	72.	808.65						
			1056.72						1724.77
Jan. 31	Sal. Off. Rep.	73.	554.89	May 31	Switched Exp.	115.	4730.		
Feb. 29	" " " "	74.	738.73	June 30	" " " "	126.	21.00		
Mar. 30	" " " "	75.	823.46	July 31	" " " "	138.	4410.		
Apr. 30	" " " "	76.	804.53	Aug. " "	" " " "	149.	16120.		
May 31	" " " "	77.	702.73	Sept. 30	" " " "	161.	8680.		
June 30	" " " "	78.	818.03	Oct. 31	" " " "	172.	2160.		
July 31	" " " "	79.	612.11	Nov. 30	" " " "	182.	1780.		
Aug. " "	" " " "	80.	866.83	Dec. 31	" " " "	196.	1720.		
Sept. 30	" " " "	81.	947.83		Journal	200.	1555.61		
Oct. 31	" " " "	82.	818.34						
Nov. 30	" " " "	83.	846.84						
Dec. 31	" " " "	84.	852.77						
			1030.761						1030.761

Philu Inlet office

1910				1911			
Jan.	31	Inlet off. beg	37.	21	4570	Oct 5	Butcher's
Feb.	28	" " "	41.	21	4468	Dec 31	Journal
Mar.	31	" " "	43.	22	4442		
Apr.	30	Inlet off. office	76.	22	4442		
May	31	Inlet off. beg	44.	22	4442		
June	30	" " "	47.	22	4442		
July	31	" " "	60.	22	4442		
Aug.	31	" " "	51.	22	4442		
Sept.	30	" " "	53.	22	4442		
Oct.	31	" " "	54.	22	4442		
Nov.	30	" " "	57.	22	4442		
Dec.	31	" " "	58.	22	4442		
Jan.	31	" " "	61.	26	1201	Dec 31	Journal
Feb.	28	" " "	62.	21	3352		
Mar.	31	" " "	63.	22	3376		
Apr.	30	Inlet off. office	194.	22	3305		
May	31	" " "	65.	22	3305		
June	30	" " "	66.	22	3305		
July	31	" " "	67.	22	3305		
Aug.	31	" " "	68.	22	3305		
Sept.	30	" " "	69.	22	3305		
Oct.	31	" " "	70.	22	3305		
Nov.	30	" " "	71.	22	3305		
Dec.	31	" " "	72.	22	3305		
Jan.	31	Inlet off. office	73.	22	3305	Dec 31	Journal
Feb.	29	" " "	74.	22	3305		
Mar.	31	" " "	75.	22	3305		
Apr.	30	" " "	76.	22	3305		
May	31	" " "	77.	22	3305		
June	30	" " "	78.	22	3305		
July	31	" " "	79.	22	3305		
Aug.	31	" " "	80.	22	3305		
Sept.	30	" " "	81.	22	3305		
Oct.	31	" " "	82.	22	3305		
Nov.	30	" " "	83.	22	3305		
Dec.	31	" " "	84.	22	3305		

3091438

65. 2597646

7537446

9100

912

139

169

161

172

187

116

200

7367766

2295613

New York Sales Office

Jan ¹ 31	Sal. off. Pay	39	444570	1910	5	of 1000000	85	1909 60
Feb 28	" " "	40	618811	Apr 28	5	L. Mearns	76	215372
Mar 31	" " "	43	822284	Aug 15	10	J. B. Smith Co	111	272322
Apr 30	" " "	45	948883	Dec 31	5	"	155	24805
May 31	" " "	47	1066746			Journal	166	4429904
June 30	" " "	47	1253266					
July 31	" " "	50	1461518					
Aug 31	" " "	51	1676882					
Sept 30	" " "	53	1894889					
Oct 31	" " "	55	2122224					
Nov 30	" " "	57	2328116					
Dec 31	" " "	58	2558654					
			45076147					45076147
Jan 31	" " "	61	2963842	Aug 25	30	Grant Co	8	17600
Feb 28	" " "	62	3161822	Dec 30	40	"	62	27210
Mar 31	" " "	63	3391988			30 Journal	65	3651894
Apr 30	" " "	64	3627105					
May 31	" " "	65	3853853					
June 30	" " "	66	4082551					
July 31	" " "	67	4314358					
Aug 31	" " "	68	4542088					
Sept 30	" " "	69	4769443					
Oct 31	" " "	70	4992805					
Nov 30	" " "	71	5212333					
Dec 31	" " "	72	5435924					
			3222604					3222604
Jan 31	Sal. off. Pay	73	2683445	July 31	Entire Sales		115	7622
Feb 29	" " "	74	2837283	Aug 30	" " "		175	3160
Mar 31	" " "	75	2995488	July 31	" " "		138	4188
Apr 30	" " "	76	3157816	Aug 30	" " "		149	5335
May 31	" " "	77	3324222	Sept 30	" " "		161	6600
June 30	" " "	78	3494711	Oct 31	" " "		172	7898
July 31	" " "	79	3669550	Nov 30	" " "		182	9285
Aug 31	" " "	80	3848668	Dec 31	" " "		191	10780
Sept 30	" " "	81	4032178			K. B. Smith Co	199	12470
Oct 31	" " "	82	4219139			Journal	200	13232
Nov 30	" " "	83	4409533					
Dec 31	" " "	84	4603442					
			3270302					3270302

Pittsburgh Sales Office

1910				1911				
Jan	31	Sale Office	39.	85399	Feb 24	Sale Office	7.	17119
Feb	28	"	41.	63666	Mar 20	Sale Office	49.	16115
Mar	31	"	43.	58140	Dec 31	Journal	16.	305147
Apr	30	"	45	24371				
				32391				32391
Jan	31	"	61.	17508	Dec 30	Journal	65.	741765
Feb	28	"	62.	25276				
Mar	31	"	65	26165				
Apr	19	Journal	194	70790				
	30	Sale Office	64	25416				
May	31	"	65	25501				
June	30	"	66	12590				
July	31	"	67	13545				
Sept	30	"	69	26566				
Oct	24	Journal	31	15048				
	31	Sale Office	70.	27400				
Nov	30	"	71	20883				
Dec	30	"	72	22426				
				241725				241725
Jan	31	Sale Office	77	25663	Dec 31	Journal	30.	751571
Feb	29	"	74	25693				
Mar	30	"	75	21341				
Apr	30	"	76	27310				
May	31	"	77	21823				
June	30	"	78	18621				
July	31	"	79	26308				
Sept	30	"	80	27700				
Oct	30	"	81	28847				
Nov	31	"	82	24374				
Dec	30	"	83	27294				
				27257				27257
				281871				281871

Boston Inland Office

1840		1841		1842		1843		1844		1845		1846		1847		1848		1849		1850		1851		1852		1853		1854		1855		1856		1857		1858		1859		1860		1861		1862		1863		1864		1865		1866		1867		1868		1869		1870		1871		1872		1873		1874		1875		1876		1877		1878		1879		1880		1881		1882		1883		1884		1885		1886		1887		1888		1889		1890		1891		1892		1893		1894		1895		1896		1897		1898		1899		1900		1901		1902		1903		1904		1905		1906		1907		1908		1909		1910		1911		1912		1913		1914		1915		1916		1917		1918		1919		1920		1921		1922		1923		1924		1925		1926		1927		1928		1929		1930		1931		1932		1933		1934		1935		1936		1937		1938		1939		1940		1941		1942		1943		1944		1945		1946		1947		1948		1949		1950		1951		1952		1953		1954		1955		1956		1957		1958		1959		1960		1961		1962		1963		1964		1965		1966		1967		1968		1969		1970		1971		1972		1973		1974		1975		1976		1977		1978		1979		1980		1981		1982		1983		1984		1985		1986		1987		1988		1989		1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		2036		2037		2038		2039		2040		2041		2042		2043		2044		2045		2046		2047		2048		2049		2050		2051		2052		2053		2054		2055		2056		2057		2058		2059		2060		2061		2062		2063		2064		2065		2066		2067		2068		2069		2070		2071		2072		2073		2074		2075		2076		2077		2078		2079		2080		2081		2082		2083		2084		2085		2086		2087		2088		2089		2090		2091		2092		2093		2094		2095		2096		2097		2098		2099		2100		2101		2102		2103		2104		2105		2106		2107		2108		2109		2110		2111		2112		2113		2114		2115		2116		2117		2118		2119		2120		2121		2122		2123		2124		2125		2126		2127		2128		2129		2130		2131		2132		2133		2134		2135		2136		2137		2138		2139		2140		2141		2142		2143		2144		2145		2146		2147		2148		2149		2150		2151		2152		2153		2154		2155		2156		2157		2158		2159		2160		2161		2162		2163		2164		2165		2166		2167		2168		2169		2170		2171		2172		2173		2174		2175		2176		2177		2178		2179		2180		2181		2182		2183		2184		2185		2186		2187		2188		2189		2190		2191		2192		2193		2194		2195		2196		2197		2198		2199		2200		2201		2202		2203		2204		2205		2206		2207		2208		2209		2210		2211		2212		2213		2214		2215		2216		2217		2218		2219		2220		2221		2222		2223		2224		2225		2226		2227		2228		2229		2230		2231		2232		2233		2234		2235		2236		2237		2238		2239		2240		2241		2242		2243		2244		2245		2246		2247		2248		2249		2250		2251		2252		2253		2254		2255		2256		2257		2258		2259		2260		2261		2262		2263		2264		2265		2266		2267		2268		2269		2270		2271		2272		2273		2274		2275		2276		2277		2278		2279		2280		2281		2282		2283		2284		2285		2286		2287		2288		2289		2290		2291		2292		2293		2294		2295		2296		2297		2298		2299		2300		2301		2302		2303		2304		2305		2306		2307		2308		2309		2310		2311		2312		2313		2314		2315		2316		2317		2318		2319		2320		2321		2322		2323		2324		2325		2326		2327		2328		2329		2330		2331		2332		2333		2334		2335		2336		2337		2338		2339		2340		2341		2342		2343		2344		2345		2346		2347		2348		2349		2350		2351		2352		2353		2354		2355		2356		2357		2358		2359		2360		2361		2362		2363		2364		2365		2366		2367		2368		2369		2370		2371		2372		2373		2374		2375		2376		2377		2378		2379		2380		2381		2382		2383		2384		2385		2386		2387		2388		2389		2390		2391		2392		2393		2394		2395		2396		2397		2398		2399		2400		2401		2402		2403		2404		2405		2406		2407		2408		2409		2410		2411		2412		2413		2414		2415		2416		2417		2418		2419		2420		2421		2422		2423		2424		2425		2426		2427		2428		2429		2430		2431		2432		2433		2434		2435		2436		2437		2438		2439		2440		2441		2442		2443		2444		2445		2446		2447		2448		2449		2450		2451		2452		2453		2454		2455		2456		2457		2458		2459		2460		2461		2462		2463		2464		2465		2466		2467		2468		2469		2470		2471		2472		2473		2474		2475		2476		2477		2478		2479		2480		2481		2482		2483		2484		2485		2486		2487		2488		2489		2490		2491		2492		2493		2494		2495		2496		2497		2498		2499		2500		2501		2502		2503		2504		2505		2506		2507		2508		2509		2510		2511		2512		2513		2514		2515		2516		2517		2518		2519		2520		2521		2522		2523		2524		2525		2526		2527		2528		2529		2530		2531		2532		2533		2534		2535		2536		2537		2538		2539		2540		2541		2542		2543		2544		2545		2546		2547		2548		2549		2550		2551		2552		2553		2554		2555		2556		2557		2558		2559		2560		2561		2562		2563		2564		2565		2566		2567		2568		2569		2570		2571		2572		2573		2574		2575		2576		2577		2578		2579		2580		2581		2582		2583		2584		2585		2586		2587		2588		2589		2590		2591		2592		2593		2594		2595		2596		2597		2598		2599		2600		2601		2602		2603		2604		2605		2606		2607		2608		2609		2610		2611		2612		2613		2614		2615		2616		2617		2618		2619		2620		2621		2622		2623		2624		2625		2626		2627		2628		2629		2630		2631		2632		2633		2634		2635		2636		2637		2638		2639		2640		2641		2642		2643		2644		2645		2646		2647		2648		2649		2650		2651		2652		2653		2654		2655		2656		2657		2658		2659		2660		2661		2662		2663		2664		2665		2666		2667		2668		2669		2670		2671		2672		26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Zimbabwe Sales Office

1910				1911				1912			
Jan	31	Sales off Reg.	39	560415	Dec 31 Journal	106	1051227				
Feb	28	"	41	681169							
Mar	31	"	43	861668							
Apr	30	"	45	1112394							
May	31	"	47	1444416							
June	30	"	49	1828192							
July	31	"	50	2222222							
Aug	31	"	51	2666666							
Sept	27	Journal	121	3111111							
Oct	30	Sales off Reg	50	3555555							
Nov	31	"	55	4000000							
Dec	30	"	57	4444444							
			58	4888888							
				5292929							
				1051227							
Jan	31	"	61	994426	Dec 31 Journal	106	1051227				
Feb	28	"	62	782270							
Mar	31	"	63	622218							
Apr	19	Journal	194	255000							
	30	Sales off Reg	64	310864							
May	31	"	65	364402							
June	30	"	66	408875							
July	31	"	67	453313							
Aug	23	"	68	497751							
	31	Sales off Reg	68	542189							
Sept	30	"	69	586627							
Oct	19	Journal	29	631065							
	24	"	31	675503							
	27	C-34111	44	719941							
	31	Sales off Reg	70	764379							
Nov	22	Nov-Dec 1910	45	808817							
	30	Sales off Reg	71	853255							
Dec	30	"	72	897693							
				942131							
Jan	31	Sales off Reg	73	986569	Aug 31 Sales & Exp	119	1600				
Feb	29	"	74	1030957	Dec 31 Journal	200	234779				
Mar	30	"	75	1076245							
Apr	30	"	76	1121533							
May	31	"	77	1166821							
June	30	"	78	1212109							
July	31	"	79	1257397							
Aug	31	"	80	1302685							
Sept	30	"	81	1347973							
Oct	31	"	82	1393261							
Nov	30	"	83	1438549							
Dec	31	"	84	1483837							
				1529125							
				2172877							

Sales of Scrap.

Mar	1	3 3d 3-4	51	16 45	1907	1	3 3d 3-4	45	92 197
Mar	8	"	62	58 30			"	45	91 151
Mar	31	Wanted	68	58 30			"	45	91 151
Mar	30	"	82	58 30			"	45	91 151
Mar	31	"	92	58 30			"	45	91 151
Mar	31	"	99	58 30			"	45	91 151
Mar	31	"	108	58 30			"	45	91 151
Mar	31	"	116	58 30			"	45	91 151
Mar	31	"	124	58 30			"	45	91 151
Mar	31	"	135	58 30			"	45	91 151
Mar	31	"	144	58 30			"	45	91 151
Mar	31	"	150	58 30			"	45	91 151
Mar	31	"	156	58 30			"	45	91 151
Mar	31	"	160	58 30			"	45	91 151
Mar	31	"	164	58 30			"	45	91 151
Mar	31	"	170	58 30			"	45	91 151
Mar	31	"	176	58 30			"	45	91 151
Mar	31	"	182	58 30			"	45	91 151
Mar	31	"	188	58 30			"	45	91 151
Mar	31	"	199	58 30			"	45	91 151
Mar	31	"	212	58 30			"	45	91 151
Mar	31	"	222	58 30			"	45	91 151
Mar	31	"	233	58 30			"	45	91 151
Mar	31	"	241	58 30			"	45	91 151
Mar	31	"	251	58 30			"	45	91 151
Mar	31	"	261	58 30			"	45	91 151
Mar	31	"	271	58 30			"	45	91 151
Mar	31	"	281	58 30			"	45	91 151
Mar	31	"	291	58 30			"	45	91 151
Mar	31	"	301	58 30			"	45	91 151
Mar	31	"	311	58 30			"	45	91 151
Mar	31	"	321	58 30			"	45	91 151
Mar	31	"	331	58 30			"	45	91 151
Mar	31	"	341	58 30			"	45	91 151
Mar	31	"	351	58 30			"	45	91 151
Mar	31	"	361	58 30			"	45	91 151
Mar	31	"	371	58 30			"	45	91 151
Mar	31	"	381	58 30			"	45	91 151
Mar	31	"	391	58 30			"	45	91 151
Mar	31	"	401	58 30			"	45	91 151
Mar	31	"	411	58 30			"	45	91 151
Mar	31	"	421	58 30			"	45	91 151
Mar	31	"	431	58 30			"	45	91 151
Mar	31	"	441	58 30			"	45	91 151
Mar	31	"	451	58 30			"	45	91 151
Mar	31	"	461	58 30			"	45	91 151
Mar	31	"	471	58 30			"	45	91 151
Mar	31	"	481	58 30			"	45	91 151
Mar	31	"	491	58 30			"	45	91 151
Mar	31	"	501	58 30			"	45	91 151
Mar	31	"	511	58 30			"	45	91 151
Mar	31	"	521	58 30			"	45	91 151
Mar	31	"	531	58 30			"	45	91 151
Mar	31	"	541	58 30			"	45	91 151
Mar	31	"	551	58 30			"	45	91 151
Mar	31	"	561	58 30			"	45	

Journal of

Dec 31	Yarker	154	1558334	Dec 31 Journal	154	2411462
"	Journal	106	66726			2411462
			2411462			
Dec 30	P. & L.	65	105273	Dec 30 Journal	65	105273
Dec 31	Works	141	667277	Dec 31 Journal	141	667277

Mar. 31	Works	68	812	Mar. 31 Journal	68	812
Apr. 30	"	82	10260	Apr. 30 Journal	82	10260
May 31	"	82	37684	May 31 Journal	82	37684
June 30	"	97	37684	June 30 Journal	97	37684
July 31	"	105	37684	July 31 Journal	105	37684
Aug. 31	"	117	37684	Aug. 31 Journal	117	37684
Sept. 30	"	116	37684	Sept. 30 Journal	116	37684
Oct. 31	"	135	37684	Oct. 31 Journal	135	37684
Nov. 30	"	144	37684	Nov. 30 Journal	144	37684
Dec 31	"	154	37684	Dec 31 Journal	154	37684
	Nov. 30	170	37684			37684

Jan 31	Works	169	31395	Jan 31 Journal	169	31395
Feb 28	"	176	32089	Feb 28 Journal	176	32089
Mar 31	"	188	32783	Mar 31 Journal	188	32783
Apr 30	Shelby	190	32783	Apr 30 Journal	190	32783
10	"	191	32783			32783
25	"	196	32783			32783
29	"	197	32783			32783
30	Works	199	32783			32783
May 2	Shelby	200	32783			32783
5	"	202	32783			32783
18	"	205	32783			32783
23	"	207	32783			32783
24	Shelby	209	32783			32783
31	Shelby	287	32783			32783
"	Works	212	32783			32783
June 28	Shelby	217	32783			32783
"	Shelby	219	32783			32783
"	Balance		32783			32783

Ledger of

June 28	Balance	219	219	June 28 Balance	219	219
30	Works	222	56146	30 Works	222	56146
July 19	Shelby	228	56146	July 19 Shelby	228	56146
31	Works	233	56146	31 Works	233	56146
Aug 16	Shelby	5	2000	Aug 16 Shelby	5	2000
31	Works	10	1250	31 Works	10	1250
Sept. 28	Shelby	19	1000	Sept. 28 Shelby	19	1000
30	Works	21	1000	30 Works	21	1000
Oct 31	"	55	1000	Oct 31	55	1000
Nov. 30	"	49	1000	Nov. 30	49	1000
Dec 30	"	62	1000	Dec 30	62	1000
"	"	63	1000		63	1000
30 P. & L.		65	1000		65	1000

Jan. 17	Shelby	69	850	Jan. 17 Shelby	69	850
Feb 17	Shelby	79	150	Feb 17 Shelby	79	150
Mar 21	Shelby	87	150	Mar 21 Shelby	87	150
Apr 27	Shelby	102	150	Apr 27 Shelby	102	150
May 31	Shelby	107	150	May 31 Shelby	107	150
June 27	Shelby	110	150	June 27 Shelby	110	150
July 31	Shelby	115	150	July 31 Shelby	115	150
Aug 31	Shelby	119	150	Aug 31 Shelby	119	150
Sept 30	Shelby	123	150	Sept 30 Shelby	123	150
Oct 31	Shelby	126	150	Oct 31 Shelby	126	150
Nov 30	Shelby	131	150	Nov 30 Shelby	131	150
Dec 31	Shelby	132	150	Dec 31 Shelby	132	150

Jan 31	Works	139	1795	Jan 31 Journal	139	1795
Feb 28	"	140	1795	Feb 28 Journal	140	1795
Mar 31	"	143	1795	Mar 31 Journal	143	1795
Apr 30	"	150	1795	Apr 30 Journal	150	1795
May 31	"	154	1795	May 31 Journal	154	1795
June 30	"	165	1795	June 30 Journal	165	1795
July 31	"	167	1795	July 31 Journal	167	1795
Aug 31	"	172	1795	Aug 31 Journal	172	1795
Sept 30	"	176	1795	Sept 30 Journal	176	1795
Oct 31	"	176	1795	Oct 31 Journal	176	1795
Nov. 30	"	176	1795	Nov. 30 Journal	176	1795
Dec 31	"	176	1795	Dec 31 Journal	176	1795

Interest & Discount

May 31 Balance	201.1	2360.91	May 31 Cash & Co. Bank	80.1	66.12
" 31 Rice Pay	60.1	17.26	June 30 " "	98.1	12.38
" 31 Cash & Co. Bank	80.1	288.88	July 27 C. Myers	250.1	208.1
June 30 Rice Pay	2.1	88.49	July 31 Cash & Co. Bank	21.2	34.99
" 31 Cash & Co. Bank	78.1	168.18	Aug 31 Cash & Co. Bank	17.1	39.42
July 14 Cash & Co. Bank	227.1	5000	Sept 30 " "	32.1	28.77
" 31 Cash & Co. Bank	130.1	137.38	Oct 31 " "	45.1	24.43
" 31 Rice Pay	2.1	88.18	Nov 30 " "	57.1	24.29
Aug 31 " "	5.1	36.41	Dec 30 " "	72.1	28.77
" 31 Cash	17.1	337.88	30 P & L	65.1	1108.34
Sept 16 S. A. Edwards	1.1	10.20			
" 30 Rice Pay	7.1	46.28			
" 31 Cash	32.1	63.45			
Oct 31 " "	45.1	108.02			
" 31 Rice Pay	9.1	25.30			
Nov 16 John W. Elliott	42.1	68.75			
" 31 Rice Pay	11.1	12.91			
" 31 Cash	57.1	138.78			
Dec 7 " "	61.1	66.1			
" 30 Rice Pay	13.1	35.02			
" 31 Cash	72.1	99.28			
" 31 Lambros	61.1	582.58			
		11143.27			
Jan 22 Cash & Co. Bank	70.1	2000	Jan 19 Cash & Co. Bank	78.1	05.1
" 31 Rice Pay	14.1	212.38	22 C. Myers	70.1	155.1
" 31 Cash & Co. Bank	72.1	78.06	15 Cash & Co. Bank	69.1	238.1
" 31 Cash	85.1	43.80	31 Cash & Co. Bank	85.1	118.04
Feb 27 Cash & Co. Bank	81.1	12.51	Feb 17 " "	82.1	8.3
" 31 " "	81.1	7800.65	29 " "	75.1	18.18
" 31 Rice Pay	15.1	47.55	Mar 18 " "	101.1	20.5
" 31 Cash	95.1	57.99	30 " "	107.1	66.37
Mar 8 Cash & Co. Bank	86.1	18.18	Apr 9 " "	111.1	9.48
" 31 Cash	86.1	86.66	5 " "	109.1	15.1
" 31 Cash	86.1	210.00	20 " "	120.1	32.39
Apr 30 Rice Pay	16.1	32.20	May 6 Cash & Co. Bank	105.1	34.44
" 31 Cash & Co. Bank	91.1	7800.65	29 Balance	11.1	21.93
" 31 " "	11.1	47.58			
" 31 Cash	10.1	17.89			
Apr 29 Cash & Co. Bank	10.1	40.20			
" 30 Rice Pay	19.1	28.28			
" 31 Cash	120.1	192.58			
" 31 Cash & Co. Bank	100.1	47.58			
May 6 John W. Elliott	101.1	818.42			
" 31 " "	105.1	68.75			
" 31 Cash & Co. Bank	107.1	83.33			
" 30 Cash & Co. Bank	109.1	311.1			
" 28 Cash & Co. Bank	110.1	79.17			
" 29 Cash & Co. Bank	111.1	17.7			
		11143.27			

Interest & Discount

May 31 Balance	415.18	37.37	May 31 Cash & Co. Bank	125.1	155.95
" 31 Rice Pay	40.1	38.53	June 29 " "	13.1	53.28
" 31 Cash	125.1	146.89	July 31 " "	31.1	87.24
" 31 Cash & Co. Bank	113.1	47.58	Aug 9 " "	39.1	91.1
" 31 Cash & Co. Bank	120.1	37.33	31 " "	49.1	134.15
June 12 Cash & Co. Bank	120.1	37.33	Sept 5 " "	51.1	12.1
" 31 Cash	21.1	40.40	" 7 " "	53.1	17.5
" 31 Cash	130.1	116.27	30 " "	29.1	45.1
" 31 Journal	124.1	846.18	30 " "	65.1	61.28
" 31 Cash	124.1	846.18	Oct 1 " "	66.1	20.1
July 23 Cash & Co. Bank	138.1	5000	" 2 " "	67.1	42.1
" 31 Cash	22.1	26.63	31 " "	81.1	20.0
" 31 Cash	31.1	158.58	Nov 23 " "	103.1	3.17
" 31 Journal	134.1	846.18	30 " "	102.1	1.00
" 31 " "	134.1	846.18	Dec 5 " "	104.1	140.85
Aug 31 Rice Pay	23.1	27.30	" 7 " "	105.1	2.5
" 31 Cash	49.1	181.14	" 24 " "	113.1	3.48
" 31 Journal	149.1	846.18	31 " "	119.1	144.23
Sept 30 Rice Pay	76.1	41.97	" 31 " "	200.1	12.97
" 31 H. W. Waller	158.1	160.00	" 31 " "	200.1	12.97
" 31 Cash	65.1	66.92			
" 31 Cash & Co. Bank	160.1	546.18			
" 31 " "	160.1	546.18			
Oct 31 Rice Pay	78.1	42.72			
" 31 Cash	78.1	42.72			
Nov 29 P. M. Edwards	161.1	750			
" 31 Cash	85.1	11.66			
" 30 Cash & Co. Bank	170.1	86.39			
" 31 " "	171.1	43.62			
Dec 13 John W. Elliott	177.1	67.75			
" 31 Cash	30.1	36.82			
" 31 Cash	102.1	143.49			
" 31 Cash & Co. Bank	151.1	86.39			
" 31 " "	171.1	67.75			
Dec 31 Rice Pay	32.1	24.36			
" 31 Cash	119.1	67.32			
" 31 Cash & Co. Bank	195.1	86.39			
" 31 " "	196.1	4.16			
" 31 Journal	196.1	7.65			
		1309.57			

Bond Interest

1910				1911			
Jan	31	to another day	75.0000	Dec	31	Journal P. 156	90000000
Feb	28	"	75.0000				
Mar	31	"	75.0000				
Apr	30	"	75.0000				
May	31	"	75.0000				
June	30	"	75.0000				
July	31	"	75.0000				
Aug	31	"	75.0000				
Sept	30	"	75.0000				
Oct	31	"	75.0000				
Nov	30	"	75.0000				
Dec	31	"	75.0000				
90000000				90000000			
Jan	31	"	75.0000	Dec	31	Journal P. 156	90000000
Feb	28	"	75.0000				
Mar	31	"	75.0000				
Apr	30	"	75.0000				
May	31	"	75.0000				
June	30	"	75.0000				
July	31	"	75.0000				
Aug	31	"	75.0000				
Sept	30	"	75.0000				
Oct	31	"	75.0000				
Nov	30	"	75.0000				
Dec	28	"	75.0000				
90000000				90000000			
Jan	31	Accrued Interest 72.	75.0000	Dec	31	Journal P. 156	90000000
Feb	29	"	75.0000				
Mar	29	"	75.0000				
Apr	30	"	75.0000				
May	31	"	75.0000				
June	29	"	75.0000				
July	31	"	75.0000				
Aug	31	"	75.0000				
Sept	30	"	75.0000				
Oct	30	"	75.0000				
Nov	"	"	75.0000				
Dec	31	"	75.0000				
90000000				90000000			

General Expenses

1910	Jan	21	By Cash	104.	1566.46	Jan	1	By Cash	47.	15
	Feb	25	"	112.	1666.50		11	By Cash	107.	107
	May	31	"	122.	1788.50		28	Grand Bal.	282.	282
			"	68.	1856.50		7	By Cash	125.	125
	Apr	20	By Cash	114.	1970.50		27	"	175.	175
			"	84.	2054.50		6	"	175.	175
	May	6	Wm. C. Co.	84.	2138.50		20	"	175.	175
		31	By Cash	144.	2282.50		31	By Cash	106.	106
			"	92.	2374.50			By Cash	282.	282
	Jun	7	By Cash	98.	2472.50			By Cash	175.	175
		17	By Cash	95.	2567.50			By Cash	175.	175
		30	By Cash	180.	2747.50			By Cash	175.	175
			"	29.	2816.50			By Cash	175.	175
	July	30	By Cash	172.	2988.50			By Cash	175.	175
		31	Wm. C. Co.	108.	3096.50			By Cash	175.	175
	Aug	31	By Cash	144.	3240.50			By Cash	175.	175
			"	116.	3356.50			By Cash	175.	175
	Sept	7	By Cash	119.	3475.50			By Cash	175.	175
		27	By Cash	124.	3599.50			By Cash	175.	175
	Oct	31	By Cash	201.	3800.50			By Cash	175.	175
			"	174.	3974.50			By Cash	175.	175
	Nov	31	By Cash	215.	4189.50			By Cash	175.	175
			"	185.	4374.50			By Cash	175.	175
		30	By Cash	12.	4386.50			By Cash	175.	175
			"	144.	4530.50			By Cash	175.	175
	Dec	31	By Cash	24.	4554.50			By Cash	175.	175
			"	151.	4705.50			By Cash	175.	175
					5066.25			By Cash	175.	175
1911	Jan	11	By Cash	165.	5231.25	Jan	17	By Cash	27.	175.8
		31	By Cash	31.	5302.25		30	By Cash	20.	127.8
		31	By Cash	168.	5470.25		31	By Cash	219.	77
		31	"	169.	5639.25			By Cash	125.	125
	Feb	6	By Cash	171.	5810.25		2	By Cash	200.	630
		28	By Cash	43.	5853.25		5	By Cash	1239.	182
			"	176.	6029.25			By Cash	1239.	182
	Mar	16	By Cash	182.	6211.25			By Cash	1239.	182
		31	By Cash	188.	6399.25			By Cash	1239.	182
	Apr	30	By Cash	199.	6598.25			By Cash	1239.	182
	May	10	By Cash	72.	6670.25			By Cash	1239.	182
		29	By Cash	209.	6879.25			By Cash	1239.	182
		31	By Cash	212.	7091.25			By Cash	1239.	182
	June	5	By Cash	85.	7176.25			By Cash	1239.	182
		9	By Cash	77.	7253.25			By Cash	1239.	182
		30	By Cash	222.	7475.25			By Cash	1239.	182
	July	11	By Cash	102.	7577.25			By Cash	1239.	182
		13	By Cash	226.	7803.25			By Cash	1239.	182
		31	By Cash	233.	8036.25			By Cash	1239.	182
	Aug	8	By Cash	5.	8041.25			By Cash	1239.	182

General Expense

1911	Aug 8	Balance	1239.82	Dec 30	Journal	65	2084.23
		Wm. Jackson & Hubert 3.	111.07				
	25	C. Mangel	9				
	31	Drinks	20				
	Sept 9	Bank	20				
	30	Drinks	21				
	Oct 19	W. H. Myers	30				
	31	Drinks	35				
	Nov 16	James & Gentry Co	42				
	30	Drinks	47				
	Dec 9	Bank	61				
	30	Drinks	63				
			2084.23				
	Jan 15	Wm. Jackson & Hubert 69	250	Aug 31	Bank	33	247.50
	26	C. Mangel	71				
	Feb 19	W. H. Myers	72	Dec 16			131
	21	Overnighting	57	31	Journal	100	274.57
	30	Wm. Jackson & Hubert 91	1000				
		Drinks	93				
	Apr 10	C. Mangel	111				
	17	C. Mangel	114				
	5	Wm. Jackson & Hubert 125	50				
	15	C. Mangel & Hubert 98	25				
	20	C. Mangel & Hubert 99	100				
	30	Drinks	102				
	May 22	State of N.Y.	110				
	29	Pro on balance due 134	150				
	31	Overnighting 117	250				
		Drinks	115				
	June 30		176				
	July 9	Wm. Jackson & Hubert 17	60				
	16	Wm. Jackson & Hubert 126	100.00				
	31	Drinks	139				
	Aug 4	"	150				
	30	"	142				
	Sept 15	Wm. Jackson & Hubert 147	165				
	26	C. Mangel 134	80				
	31	Drinks	172				
	Nov 22	Wm. Jackson & Hubert 179	180				
	30	Drinks	184				
	Dec 12	Bank charged 110	245				
	19	Wm. Jackson & Hubert 190	250				
	23	C. Mangel 183	81.0				
	31	Drinks	185				
			2745.71				
			2745.71				

Deutsche Salz Expense

1772	May 31	Salz Office	115.	230.76	May 31	Journal	2.00	1793/650
	June 30	"	120	68.77				
	July 31	"	138.	61.28				
	Aug 31	"	129	33.45				
	Sept 30	"	161.	72.20				
	Oct 31	"	172.	11.35				
	Nov 30	"	182	64.45				
	Dec. 10	Salz Luth. Co.	158.	10.80				
	23	State of L.	192	70.00				
	"	Mar. Luth. Co.	193.	17.00				
	31	Salz Office	196	48.50				
				1236.50				1296.50

Rnt. D.D.W.

1910				1910			
Jan	19	5. Rod.	99.	50.00	Dec. 31 Journal	106.	200.00
Feb	12	"	124.	50.00			
Mar	7	"	161.	50.00			
Apr	7	"	104.	50.00			
				200.00			200.00
Jan	19	2. 80643	29.	50.00	Dec. 30 Journal	65.	200.00
Feb	3	" 81719	54.	50.00			
Mar	15	" 82830	106.	50.00			
Apr	5	" 83902	34.	50.00			
				200.00			200.00
Jan	9	2. 32996	76.	50.00	Dec. 31 Journal	100.	200.00
Feb	10	" 26078	111.	50.00			
Mar	9	" 36800	17.	50.00			
Apr	8	" 27952	69.	50.00			
				200.00			200.00

Reserv. Bad Debt

1910	19	3. Bad	77	142.2	Jan. 1. Bal. #1	299	6000.00
May	5		114	1500	Dec. 25. Amount Received	132	201.16
	6		115	11.12	Dec. 10. Amount Received Co.	145	52.50
	51		122	25.16	" 12 Geo. D. Oppen	149	616.78
Apr	16	Brooklyn P. Co.	74	10.20	31 Journal	186	260.12
	20	Long Island Co.	77	654.53			
May	20	Long Island Co.	122	19.64			
	29	Long Island Co.	122	21.55			
Nov.	16	Walter's Bond Co. 189		492.28			
Dec.	12	Comm. for Bond Co. 149		612.70			
	31	Balance		6000.00			
				6429.52			
Jan	5	Clayton's Office 161	395	Jan. 1. Balance			6429.52
Mar	3	Brooklyn P. Co. 179	745.00	Dec. 30. P.D.	65		3378.14
	7	Geo. H. Thomas 180	47.53				
	16	Wm. J. Damm 181	275.90				
	30	Geo. D. Marsh 185	216.03				
	31	Chas. H. Damm 187	144.75				
Apr	10	W. H. Thomas 191	113.63				
June	10	W. H. Thomas 216	507.55				
Aug	31	W. H. Thomas 9	120.41				
Sept	9	W. H. Thomas 15	116.42				
Dec.	30	Balance 65	214.52				
			9378.14				
Jan	8	W. H. Thomas Co. 76	457.13	Jan. 1. Balance			7645.57
July	9	W. H. Thomas 149	1000.00	Oct. 10. Cash Unintended 55			7645.57
Oct	23	W. H. Thomas 131	177.9	Dec. 31. Journal	100		116.78
Nov	11	W. H. Thomas 154	26.4				
Dec.	31	Balance 131	778.43				
			778.43				

Robt. N. Thompson

1910	1910	1910	1910	1910	1910
Jan 1	Red.	397.1270.888.4	July 7	of Sunday	45.5 1000000
4	Cal.	84 600000	15	"	50. 8000000
11	"	90 400000	22	"	57. 5000000
18	Sunday	50 10000000	29	"	64. 7000000
25	"	100 10000000	Aug 5	"	75. 10000000
Feb 1	Cal.	100 10000000	12	"	80. 10000000
8	Sunday	100 10000000	19	"	90. 10000000
15	Cal.	100 10000000	26	"	100. 10000000
22	Sunday	100 10000000	Sept 2	"	110. 10000000
29	Cal.	100 10000000	9	"	120. 10000000
Mar 6	Sunday	100 10000000	16	"	130. 10000000
13	Cal.	100 10000000	23	"	140. 10000000
20	Sunday	100 10000000	30	"	150. 10000000
27	Cal.	100 10000000	Oct 7	"	160. 10000000
Apr 3	Sunday	100 10000000	14	"	170. 10000000
10	Cal.	100 10000000	21	"	180. 10000000
17	Sunday	100 10000000	28	"	190. 10000000
24	Cal.	100 10000000	Nov 4	"	200. 10000000
1	Sunday	100 10000000	11	"	210. 10000000
8	Cal.	100 10000000	18	"	220. 10000000
15	Sunday	100 10000000	25	"	230. 10000000
22	Cal.	100 10000000	Dec 2	"	240. 10000000
29	Sunday	100 10000000	9	"	250. 10000000
May 6	Cal.	100 10000000	16	"	260. 10000000
13	Sunday	100 10000000	23	"	270. 10000000
20	Cal.	100 10000000	30	"	280. 10000000
27	Sunday	100 10000000	Jan 6	"	290. 10000000
Jun 3	Cal.	100 10000000	13	"	300. 10000000
10	Sunday	100 10000000	20	"	310. 10000000
17	Cal.	100 10000000	27	"	320. 10000000
24	Sunday	100 10000000	Feb 3	"	330. 10000000
1	Cal.	100 10000000	10	"	340. 10000000
8	Sunday	100 10000000	17	"	350. 10000000
15	Cal.	100 10000000	24	"	360. 10000000
22	Sunday	100 10000000	3	"	370. 10000000
29	Cal.	100 10000000	10	"	380. 10000000
Sum. (Total)		347220.44	17	"	390. 10000000
			24	"	400. 10000000
			31	"	410. 10000000
			Mar 7	"	420. 10000000
			14	"	430. 10000000
			21	"	440. 10000000
			28	"	450. 10000000
			Apr 4	"	460. 10000000
			11	"	470. 10000000
			18	"	480. 10000000
			25	"	490. 10000000
			May 2	"	500. 10000000
			9	"	510. 10000000
			16	"	520. 10000000
			23	"	530. 10000000
			30	"	540. 10000000
			Jun 6	"	550. 10000000
			13	"	560. 10000000
			20	"	570. 10000000
			27	"	580. 10000000
			Jul 4	"	590. 10000000
			11	"	600. 10000000
			18	"	610. 10000000
			25	"	620. 10000000
			Aug 1	"	630. 10000000
			8	"	640. 10000000
			15	"	650. 10000000
			22	"	660. 10000000
			29	"	670. 10000000
			Sum. (Total)		347220.44

A. B. Hoover

1810

Jan 1 Lip #1

209

Hose

1812

Sep 31

Ledges #3

207

25000

Geo. D. Palmer, Capt.

1910	Jan.	1	Sect. #	3120	6066.40	1910	1 of lumber	41.4	6.07
		12	bad	77	6.00	1910	5 of lumber	71.4	11.00
		11		8	6.00	1910	11 "	72.8	8.13
		11	Helomah	107.80	50.40	1910	6 "	84.8	20.80
		23		108	20.40	1910	7 "	94.8	11.25
		25		110.8	6.00	1910	13 "	106.8	9.45
		27		112.8	147.50	1910	29 "	110.8	24.45
		14		116.8	9.45	1910	2 "	116.8	27.45
		17		117.8	112.45	1910	7 "	120.8	31.45
		21		121.8	11.45	1910	12 "	120.8	10.45
		23		122.8	11.45	1910	18 "	140.8	30.00
		25		123.8	11.45	1910	28 "	141.8	21.85
		27		124.8	37.45	1910	78 "	142.8	13.85
		29		125.8	2.45	1910	15 "	149.8	57.00
		31		126.8	13.45	1910	15 "	150.8	95.00
		1		127.8	6.00	1910	27 "	152.8	11.30
		3		128.8	13.45	1910	9 "	162.8	81.30
		5		129.8	13.45	1910	16 "	163.8	57.00
		7		130.8	21.45	1910	17 "	164.8	64.40
		9		131.8	15.45	1910	21 "	165.8	25.52
		11		132.8	9.45	1910	26 "	166.8	15.40
		13		133.8	11.45	1910	16 "	173.8	22.45
		15		134.8	11.45	1910	20 "	183.8	21.99
		17		135.8	11.45	1910	8 "	184.8	11.30
		19		136.8	11.45	1910	10 "	191.8	21.35
		21		137.8	11.45	1910	12 "	192.8	46.93
		23		138.8	11.45	1910	15 "	193.8	60.00
		25		139.8	11.45	1910	22 "	195.8	145.99
		27		140.8	11.45	1910	12 "	205.8	160.99
		29		141.8	11.45	1910	10 "	215.8	42.50
		31		142.8	11.45	1910	14 "	216.8	21.85
		1		143.8	11.45	1910	25 "	217.8	28.40
		3		144.8	11.45	1910	25 "	218.8	28.40
		5		145.8	11.45	1910	25 "	219.8	28.40
		7		146.8	11.45	1910	25 "	220.8	28.40
		9		147.8	11.45	1910	25 "	221.8	28.40
		11		148.8	11.45	1910	25 "	222.8	28.40
		13		149.8	11.45	1910	25 "	223.8	28.40
		15		150.8	11.45	1910	25 "	224.8	28.40
		17		151.8	11.45	1910	25 "	225.8	28.40
		19		152.8	11.45	1910	25 "	226.8	28.40
		21		153.8	11.45	1910	25 "	227.8	28.40
		23		154.8	11.45	1910	25 "	228.8	28.40
		25		155.8	11.45	1910	25 "	229.8	28.40
		27		156.8	11.45	1910	25 "	230.8	28.40
		29		157.8	11.45	1910	25 "	231.8	28.40
		31		158.8	11.45	1910	25 "	232.8	28.40
		1		159.8	11.45	1910	25 "	233.8	28.40
		3		160.8	11.45	1910	25 "	234.8	28.40
		5		161.8	11.45	1910	25 "	235.8	28.40
		7		162.8	11.45	1910	25 "	236.8	28.40
		9		163.8	11.45	1910	25 "	237.8	28.40
		11		164.8	11.45	1910	25 "	238.8	28.40
		13		165.8	11.45	1910	25 "	239.8	28.40
		15		166.8	11.45	1910	25 "	240.8	28.40
		17		167.8	11.45	1910	25 "	241.8	28.40
		19		168.8	11.45	1910	25 "	242.8	28.40
		21		169.8	11.45	1910	25 "	243.8	28.40
		23		170.8	11.45	1910	25 "	244.8	28.40
		25		171.8	11.45	1910	25 "	245.8	28.40
		27		172.8	11.45	1910	25 "	246.8	28.40
		29		173.8	11.45	1910	25 "	247.8	28.40
		31		174.8	11.45	1910	25 "	248.8	28.40
		1		175.8	11.45	1910	25 "	249.8	28.40
		3		176.8	11.45	1910	25 "	250.8	28.40
		5		177.8	11.45	1910	25 "	251.8	28.40
		7		178.8	11.45	1910	25 "	252.8	28.40
		9		179.8	11.45	1910	25 "	253.8	28.40
		11		180.8	11.45	1910	25 "	254.8	28.40
		13		181.8	11.45	1910	25 "	255.8	28.40
		15		182.8	11.45	1910	25 "	256.8	28.40
		17		183.8	11.45	1910	25 "	257.8	28.40
		19		184.8	11.45	1910	25 "	258.8	28.40
		21		185.8	11.45	1910	25 "	259.8	28.40
		23		186.8	11.45	1910	25 "	260.8	28.40
		25		187.8	11.45	1910	25 "	261.8	28.40
		27		188.8	11.45	1910	25 "	262.8	28.40
		29		189.8	11.45	1910	25 "	263.8	28.40
		31		190.8	11.45	1910	25 "	264.8	28.40
		1		191.8	11.45	1910	25 "	265.8	28.40
		3		192.8	11.45	1910	25 "	266.8	28.40
		5		193.8	11.45	1910	25 "	267.8	28.40
		7		194.8	11.45	1910	25 "	268.8	28.40
		9		195.8	11.45	1910	25 "	269.8	28.40
		11		196.8	11.45	1910	25 "	270.8	28.40
		13		197.8	11.45	1910	25 "	271.8	28.40
		15		198.8	11.45	1910	25 "	272.8	28.40
		17		199.8	11.45	1910	25 "	273.8	28.40
		19		200.8	11.45	1910	25 "	274.8	28.40
		21		201.8	11.45	1910	25 "	275.8	28.40
		23		202.8	11.45	1910	25 "	276.8	28.40
		25		203.8	11.45	1910	25 "	277.8	28.40
		27		204.8	11.45	1910	25 "	278.8	28.40
		29		205.8	11.45	1910	25 "	279.8	28.40
		31		206.8	11.45	1910	25 "	280.8	28.40
		1		207.8	11.45	1910	25 "	281.8	28.40
		3		208.8	11.45	1910	25 "	282.8	28.40
		5		209.8	11.45	1910	25 "	283.8	28.40
		7		210.8	11.45	1910	25 "	284.8	28.40
		9		211.8	11.45	1910	25 "	285.8	28.40
		11		212.8	11.45	1910	25 "	286.8	28.40
		13		213.8	11.45	1910	25 "	287.8	28.40
		15		214.8	11.45	1910	25 "	288.8	28.40
		17		215.8	11.45	1910	25 "	289.8	28.40
		19		216.8	11.45	1910	25 "	290.8	28.40
		21		217.8	11.45	1910	25 "	291.8	28.40
		23		218.8	11.45	1910	25 "	292.8	28.40
		25		219.8	11.45	1910	25 "	293.8	28.40
		27		220.8	11.45	1910	25 "	294.8	28.40
		29		221.8	11.45	1910	25 "	295.8	28.40
		31		222.8	11.45	1910	25 "	296.8	28.40
		1		223.8	11.45	1910	25 "	297.8	28.40
		3		224.8	11.45	1910	25 "	298.8	28.40
		5		225.8	11.45	1910	25 "	299.8	28.40
		7		226.8	11.45	1910	25 "	300.8	28.40
		9		227.8	11.45	1910	25 "	301.8	28.40
		11		228.8	11.45	1910	25 "	302.8	28.40
		13		229.8	11.45	1910	25 "	303.8	28.40
		15		230.8	11.45	1910	25 "	304.8	28.40
		17		231.8	11.45	1910	25 "	305.8	28.40
		19		232.8	11.45	1910	25 "	306.8	28.40
		21		233.8	11.45	1910	25 "	307.8	28.40
		23		234.8	11.45	1910	25 "	308.8	28.40
		25		235.8	11.45	1910	25 "	309.8	28.40
		27		236.8	11.45	1910	25 "	310.8	28.40
		29		237.8	11.45	1910	25 "	311.8	28.40
		31		238.8	11.45	1910	25 "	312.8	28.40
		1		239.8	11.45	1910	25 "	313.8	28.40
		3		240.8	11.45	1910	25 "	314.8	28.40
		5		241.8	11.45	1910	25 "	315.8	28.40
		7		242.8	11.45	1910	25 "	316.8	28.40
		9		243.8	11.45	1910	25 "	317.8	28.40
		11		244.8	11.45	1910	25 "	318.8	28.40
		13		245.8	11.45	1910	25 "	319.8	28.40
		15		246.8	11.45	1910	25 "	320.8	28.40
		17		247.8	11.45	1910	25 "	321.8	28.40
		19		248.8	11.45	1910	25 "	322.8	28.40
		21		249.8	11.45	1910	25 "	323.8	28.40
		23		250.8	11.45	1910	25 "	324.8	28.40
		25		251.8	11.45	1910	25 "	325.8	28.40
		27		252.8	11.45	1910	25 "	326.8	28.40
		29		253.8	11.45	1910	25 "	327.8	28.40
		31		254.8	11.45	1910	25 "	328.8	28.40
		1		255.8	11.45	1910	25 "	329.8	28.40
		3		256.8	11.45	1910	25 "	330.8	28.40
		5		257.8	11.45	1910	25 "	331.8	28.40
		7		258.8	11.45	1910	25 "	332.8	28.40
		9		259.8	11.45	1910	25 "	333.8	28.40
		11		260.8	11.45	1910	25 "	334.8	28.40
		13		261.8	11.45	1910	25 "	335.8	28.40
		15		262.8	11.45	1910	25 "	336.8	28.40
		17		263.8	11.45	1910	25 "	337.8	28.40
		19							

E. Meyer, Jr., & Son

1890	17	to Samuel	215	675.44	Aug. 31	Balance	51	925.279
1891	12	Sal	122	145.00	Sept. 30		50	1875.272
	22		123	145.00	Oct. 31	North Shore	128	4.000
	24		124	145.00		28	12	4.000
	1		125	145.00	Nov. 31	Nov. 31	58	1875.272
	11		126	145.00	Nov. 31	Nov. 31	141	40.78
	12		127	145.00	Dec. 31	Dec. 31	57	1875.272
	21		128	145.00	Jan. 31	Jan. 31	58	1875.272
	27		129	145.00	Feb. 21	Feb. 21	165	44.08
	30		130	145.00	Mar. 31	Mar. 31	28	1875.272
	31		131	145.00	Apr. 30	Apr. 30	61	1875.272
	1		132	145.00	May 31	May 31	174	1571
	11		133	145.00	June 30	June 30	29	10000
	14		134	145.00	July 31	July 31	62	1875.272
	24		135	145.00	Aug. 31	Aug. 31	181	80000
	28		136	145.00	Sept. 30	Sept. 30	46	60000
	31		137	145.00	Oct. 31	Oct. 31	173	1440
	1		138	145.00	Nov. 30	Nov. 30	65	1875.272
	9		139	145.00	Dec. 31	Dec. 31	75	1875.272
	10		140	145.00				
	14		141	145.00				
	17		142	145.00				
	21		143	145.00				
	27		144	145.00				
	31		145	145.00				
1891	9		146	145.00				
	10		147	145.00				
	14		148	145.00				
	17		149	145.00				
	21		150	145.00				
	27		151	145.00				
	31		152	145.00				
1892	9		153	145.00				
	10		154	145.00				
	14		155	145.00				
	17		156	145.00				
	21		157	145.00				
	27		158	145.00				
	31		159	145.00				
1893	6		160	145.00				
	9		161	145.00				
	17		162	145.00				
	24		163	145.00				
	30		164	145.00				
	31		165	145.00				
	6		166	145.00				
	9		167	145.00				
	17		168	145.00				
	24		169	145.00				
	30		170	145.00				
	31		171	145.00				
	6		172	145.00				
	9		173	145.00				
	17		174	145.00				
	24		175	145.00				
	30		176	145.00				
	31		177	145.00				
	6		178	145.00				
	9		179	145.00				
	17		180	145.00				
	24		181	145.00				
	30		182	145.00				
	31		183	145.00				
	6		184	145.00				
	9		185	145.00				
	17		186	145.00				
	24		187	145.00				
	30		188	145.00				
	31		189	145.00				

79,375.61

Emmanuel Meyer, M.D. of Sales

1891	1	Balance	124	1403.76	Apr. 19	Apr. 19	194	481.16
	1	0. 3171.2	57	469.34	24		195	161.64
	7	3175.25	57	469.34	30	Sal. Off. Reg.	64	1875.272
	12	3181.9	67	633.73	May 27	May 27	209	44.13
	16	3181.11/2	66	1875.272	31	Sal. Off. Reg.	65	1875.272
	5	3200	70	31.67	June 10	June 10	215	500
	12	3211.25	73	361.80	28	Sal.	220	402.4
	35	3221.100	77	333.43	30	Sal. Off. Reg.	66	1875.272
	7	3226.67	76	40.70	July 13	July 13	226	25.160
	20	326.201	93	132.533	31	Sal. Off. Reg.	67	170.817
	21	3276.17	97	161.276	Aug 8	Aug 8	235	1875.272
	10	32780	102	403.243	1	Sal.		144.1
	18	32879	108	160	1	Sal. Off. Reg.		63
	27	329134	110	733.39	28	Sal.	9	55.26
	27	329134	230	205	31	Sal. Off. Reg.		273.08
	28	33092	112	330.294	1	Sal. Off. Reg.	68	1875.272
	10	3327.14	7	330.97	Sept 18	Sept 18	16	2400
	22	33311	11	101.09	18	Sal.		2.183
	24	33475	14	29.378	30	Sal. Off. Reg.	69	1875.272
	30	33475	16	333.22	Oct 18	Oct 18	27	120.75
	7	3357.15	20	2574.96	24	Sal.		10000
	11	33532	22	1840.49	24	Sal.	31	63.11
	22	33726	29	150000	31	Sal.	33	1744
	28	33761	31	150000	1	Sal. Off. Reg.	70	1875.272
	4	3376.44		150000	10	Sal. Off. Reg.	40	22.5
	8	33771	33	398.36	10	Sal. Off. Reg.	40	22.110
	11	33848	37	2676.52	16	Sal.	41	20000
	19	34001	40	1459.12	27	Sal.	47	2.900
	24	34045	42	10000	30	Sal. Off. Reg.	71	1875.272
	27	34113	46	63.11	Dec 9	Dec 9	51	5800
	8	34114		733.14	15	Sal.		20000
	9	34151/2	49	542.43	30	Sal. Off. Reg.		1875.272
	14	34154	49	333.64	1	Sal.		1875.272
	17	34189	50	412.13				
	17	34209	52	20000				
	18	34351/3	56	414.64				
	18	3452	63	3800				
	14	34563	1	66.347				
	21	34710	66	526.95				
	29	34850	71	300.58				
	1	34850		223.39				
1892	1	Balance	75	238.74	Jan. 9	Jan. 9	67	62.07
	9	0. 34851/2	76	600.02	26	Sal. Off. Reg.	71	159.00
	19	35061/2	77	223.01	1	Sal. Off. Reg.		152.1
	22	35110	70	155	8	Sal. Off. Reg.	67	1875.272
	22	35200	81	563.01	31	Sal. Off. Reg.	72	1875.272
	29	35335	84	220.66	1	Sal.		223.39
				10000				10000

Emanuel Meyer, Mgr. of Sales.

1914	1	Balance	365.	22	3191	5	Sept 5	Sept 5	76.	11079.
	6	35044/1/7	57.	23	36844	9	Sept 9	Sept 9	77.	1055.
	14	35444/1/10	80.	24	33939	14	Sept 14	Sept 14	78.	5000.
	16	35447	91.	25	42566	27	Sept 27	Sept 27	74.	72211.
	21	3556617	94.	26	33378	Nov 4	Nov 4	Nov 4	84.	6050.
Man	24	35589	96.	27	183250	13	Nov 13	Nov 13	58.	1544.
	10	35844/1/6	101.	28	165564	30	Nov 30	Nov 30	75.	12344.
	22	35917-1-10	105.	29	16391	15	Dec 15	Dec 15	98.	1672.
Apr	10	3609/1/11	111.	30	36393	20	Dec 20	Dec 20	99.	100.
	24	36144/1/10	116.	31	35410	30	Dec 30	Dec 30	101.	750.
May	3	36150	118.	1	44838	"	Jan 1	Jan 1	76.	52750.
	16	36237/1	124.	2	47424	9	Jan 9	Jan 9	106.	11875.
	18	36200/1	121.	3	14625	15	Jan 15	Jan 15	107.	1994.
	3	36210	122.	4	329200	20	Jan 20	Jan 20	109.	37166.
	13	36209	126.	5	51464	28	Jan 28	Jan 28	110.	15625.
	21	36254/1/7	130.	6	164649	31	Jan 31	Jan 31	113.	32251.
	28	364081	134.	7	338796	"	Feb 1	Feb 1	77.	133108.
June	5	36444/1/10	137.	8	215044	10	Feb 10	Feb 10	120.	185554.
	11	36501/10	141.	9	329198	13	Feb 13	Feb 13	121.	27775.
	18	36634/15	149.	10	78784	19	Feb 19	Feb 19	122.	37124.
	20	36674	150.	11	207620	26	Feb 26	Feb 26	123.	4876.
	25	36744/1/9	151.	12	154722	"	Feb 27	Feb 27	"	10963.
	26	36766/7	152.	13	10131	27	Feb 27	Feb 27	124.	2168.
	28	36766/1/10	153.	14	19600	27	Feb 27	Feb 27	124.	31810.
July	1	36770/1/2	155.	15	343649	30	Feb 30	Feb 30	78.	76499.
	16	36770	156.	16	49800	12	Mar 12	Mar 12	131.	48806.
	17	37111/6	157.	17	186509	23	Mar 23	Mar 23	133.	54665.
	20	37111/8	158.	18	248088	31	Mar 31	Mar 31	79.	185996.
Aug	1	37111/11	159.	19	53000	1	Apr 1	Apr 1	141.	18570.
	6	37207	160.	20	331388	7	Apr 7	Apr 7	141.	78664.
	9	37346/6	161.	21	13683	12	Apr 12	Apr 12	143.	76145.
	16	37380	162.	22	65248	16	Apr 16	Apr 16	144.	10212.
	20	37386/7	163.	23	141574	20	Apr 20	Apr 20	146.	19075.
	20	37535	164.	24	191131	"	Apr 21	Apr 21	"	4450.
	27	37544/1/10	165.	25	33333	27	Apr 27	Apr 27	147.	14932.
	27	37600/4	166.	26	25414	"	Apr 28	Apr 28	"	10485.
	28	37619	167.	27	65440	31	Apr 31	Apr 31	80.	57447.
	10	37761/10	168.	28	337478	11	May 11	May 11	104.	37710.
	12	37777/1/7	169.	29	31366	"	May 12	May 12	105.	71496.
Sept	24	37857	170.	30	347857	19	May 19	May 19	107.	17060.
	"	37862/10	171.	31	29507	"	May 20	May 20	"	12447.
	28	37975	172.	1	24617	30	May 30	May 30	81.	76553.
	2	37979	173.	2	156620	9	Jun 9	Jun 9	104.	11055.
	9	37984/5	174.	3	190648	"	Jun 10	Jun 10	"	30090.
	15	38011/1/10	175.	4	110044	"	Jun 11	Jun 11	"	37835.
	19	38144/1/6	176.	5	238298	18	Jun 18	Jun 18	65.	37147.
	24	38254	177.	6	1400449	"	Jun 19	Jun 19	"	47874.
	25	38201	178.	7	42016	25	Jun 25	Jun 25	109.	100497.
				8	100497	25	Jun 25	Jun 25	109.	100497.

Emanuel Meyer, Mgr. of Sales.

1912				1913			
Oct.	25	Balance	266.	Oct.	25	Balance	266.
	28	38243	83.		28	38243	83.
Nov.	2	38386	86.		2	38386	86.
	12	38456	90.		12	38456	90.
	15	38589	94.		15	38589	94.
	18	38667	96.		18	38667	96.
	22	38876	100.		22	38876	100.
Dec.	6	38917	104.		6	38917	104.
	12	38955	107.		12	38955	107.
	13	39180	110.		13	39180	110.
	23	39348	116.		23	39348	116.
	31	39413	119.		31	39413	119.

2665525

North American Port. Co. Co.

1910

Jan

Led. #1 11-11-27 3.15

Bul. C.R. 2192

491,1989

Jan

4

Sand

252

174,77

167829

Jan

12

"

371

673,489

709068

Jan

1

"

301

11,800

709068

Shelby H. Thompson's Ledger

1910	Apr. 1	Due day	2.00	915.00	1910	Apr. 4	Due day	4.50	1110.00
			2.10	917.10		17	Due day	5.00	1115.00
			2.20	919.30		15	Account Due out	73.00	900.00
			2.30	921.60		20	Due day	6.00	2317.50
			2.40	924.00		21	Due day	6.00	2323.50
			2.50	926.50		22	Due day	6.00	2329.50
			3.00	929.50		23	Due day	6.00	2335.50
			3.10	932.60		24	Due day	6.00	2341.50
			3.20	935.80		25	Due day	6.00	2347.50
			3.30	939.10		26	Due day	6.00	2353.50
			3.40	942.50		27	Due day	6.00	2359.50
			3.50	946.00		28	Due day	6.00	2365.50
			4.00	949.50		29	Due day	6.00	2371.50
			4.10	953.60		30	Due day	6.00	2377.50
			4.20	957.80		31	Due day	6.00	2383.50
			4.30	962.10					
			4.40	966.50					
			4.50	971.00					
			4.60	975.60					
			4.70	980.30					
			4.80	985.10					
			4.90	990.00					
			5.00	995.00					
			5.10	1000.00					
			5.20	1005.00					
			5.30	1010.00					
			5.40	1015.00					
			5.50	1020.00					
			5.60	1025.00					
			5.70	1030.00					
			5.80	1035.00					
			5.90	1040.00					
			6.00	1045.00					
			6.10	1050.00					
			6.20	1055.00					
			6.30	1060.00					
			6.40	1065.00					
			6.50	1070.00					
			6.60	1075.00					
			6.70	1080.00					
			6.80	1085.00					
			6.90	1090.00					
			7.00	1095.00					
			7.10	1100.00					
			7.20	1105.00					
			7.30	1110.00					
			7.40	1115.00					
			7.50	1120.00					
			7.60	1125.00					
			7.70	1130.00					
			7.80	1135.00					
			7.90	1140.00					
			8.00	1145.00					
			8.10	1150.00					
			8.20	1155.00					
			8.30	1160.00					
			8.40	1165.00					
			8.50	1170.00					
			8.60	1175.00					
			8.70	1180.00					
			8.80	1185.00					
			8.90	1190.00					
			9.00	1195.00					
			9.10	1200.00					
			9.20	1205.00					
			9.30	1210.00					
			9.40	1215.00					
			9.50	1220.00					
			9.60	1225.00					
			9.70	1230.00					
			9.80	1235.00					
			9.90	1240.00					
			10.00	1245.00					
			10.10	1250.00					
			10.20	1255.00					
			10.30	1260.00					
			10.40	1265.00					
			10.50	1270.00					
			10.60	1275.00					
			10.70	1280.00					
			10.80	1285.00					
			10.90	1290.00					
			11.00	1295.00					
			11.10	1300.00					
			11.20	1305.00					
			11.30	1310.00					
			11.40	1315.00					
			11.50	1320.00					
			11.60	1325.00					
			11.70	1330.00					
			11.80	1335.00					
			11.90	1340.00					
			12.00	1345.00					
			12.10	1350.00					
			12.20	1355.00					
			12.30	1360.00					
			12.40	1365.00					
			12.50	1370.00					
			12.60	1375.00					
			12.70	1380.00					
			12.80	1385.00					
			12.90	1390.00					
			13.00	1395.00					
			13.10	1400.00					
			13.20	1405.00					
			13.30	1410.00					
			13.40	1415.00					
			13.50	1420.00					
			13.60	1425.00					
			13.70	1430.00					
			13.80	1435.00					
			13.90	1440.00					
			14.00	1445.00					
			14.10	1450.00					
			14.20	1455.00					
			14.30	1460.00					
			14.40	1465.00					
			14.50	1470.00					
			14.60	1475.00					
			14.70	1480.00					
			14.80	1485.00					
			14.90	1490.00					
			15.00	1495.00					
			15.10	1500.00					
			15.20	1505.00					
			15.30	1510.00					
			15.40	1515.00					
			15.50	1520.00					
			15.60	1525.00					
			15.70	1530.00					
			15.80	1535.00					
			15.90	1540.00					
			16.00	1545.00					
			16.10	1550.00					
			16.20	1555.00					
			16.30	1560.00					
			16.40	1565.00					
			16.50	1570.00					
			16.60	1575.00					
			16.70	1580.00					
			16.80	1585.00					
			16.90	1590.00					
			17.00	1595.00					
			17.10	1600.00					
			17.20	1605.00					
			17.30	1610.00					
			17.40	1615.00					
			17.50	1620.00					
			17.60	1625.00					
			17.70	1630.00					
			17.80	1635.00					
			17.90	1640.00					
			18.00	1645.00					
			18.10	1650.00					
			18.20	1655.00					
			18.30	1660.00					
			18.40	1665.00					
			18.50	1670.00					
			18.60	1675.00					
			18.70	1680.00					
			18.80	1685.00					
			18.90	1690.00					
			19.00	1695.00					
			19.10	1700.00					
			19.20	1705.00					
			19.30	1710.00					
			19.40	1715.00					
			19.50	1720.00					
			19.60	1725.00					
			19.70	1730.00					
			19.80	1735.00					
			19.90	1740.00					
			20.00	1745.00					
			20.10	1750.00					
			20.20	1755.00					
			20.30	1760.00					
			20.40	1765.00					
			20.50	1770.00					
			20.60	1775.00					
			20.70	1780.00					
			20.80	1785.00					
			20.90	1790.00					
			21.00	1795.00					
			21.10	1800.00					
			21.20	1805.00					
			21.30	1810.00					
			21.40	1815.00					
			21.50	1820.00					
			21.60	1825.00					
			21.70	1830.00					
			21.80	1835.00					
			21.90	1840.00					
			22.00	1845.00					
			22.10	1850.00					
			22.20	1855.00					
			22.30	1860.00					
			22.40	1865.00					
			22.50	1870.00					
			22.60	1875.00					
			22.70	1880.00					
			22.80	1885.00					

Thomas A. Edison Library Note

1891	1	to	Aug 12	177	442092.97	1891	1	to	Aug 12	177	355193.99
1892	1	to	Aug 12	178	106099.97	1892	1	to	Aug 12	178	105152097.27
1893	1	to	Aug 12	179	101121.21	1893	1	to	Aug 12	179	39722.67
1894	1	to	Aug 12	180	107141.41	1894	1	to	Aug 12	180	66744.41
1895	1	to	Aug 12	181	111199.99	1895	1	to	Aug 12	181	51744.41
1896	1	to	Aug 12	182	108099.99	1896	1	to	Aug 12	182	114111.41
1897	1	to	Aug 12	183	76711.11	1897	1	to	Aug 12	183	24555.55
1898	1	to	Aug 12	184	111199.99	1898	1	to	Aug 12	184	71779.79
1899	1	to	Aug 12	185	66700.00	1899	1	to	Aug 12	185	41271.91
1900	1	to	Aug 12	186	111199.99	1900	1	to	Aug 12	186	52044.44
1901	1	to	Aug 12	187	100000.00	1901	1	to	Aug 12	187	37777.77
1902	1	to	Aug 12	188	101515.15	1902	1	to	Aug 12	188	62229.91
1903	1	to	Aug 12	189	111199.99	1903	1	to	Aug 12	189	79622.55
1904	1	to	Aug 12	190	111199.99	1904	1	to	Aug 12	190	51000.00
1905	1	to	Aug 12	191	111199.99	1905	1	to	Aug 12	191	47000.00
1906	1	to	Aug 12	192	66700.00	1906	1	to	Aug 12	192	46700.00
1907	1	to	Aug 12	193	79970.70	1907	1	to	Aug 12	193	51000.00
1908	1	to	Aug 12	194	100000.00	1908	1	to	Aug 12	194	52000.00
1909	1	to	Aug 12	195	62225.51	1909	1	to	Aug 12	195	57874.74
1910	1	to	Aug 12	196	51000.00	1910	1	to	Aug 12	196	52020.00
1911	1	to	Aug 12	197	47000.00	1911	1	to	Aug 12	197	61000.00
1912	1	to	Aug 12	198	79922.25	1912	1	to	Aug 12	198	47000.00
1913	1	to	Aug 12	199	66700.00	1913	1	to	Aug 12	199	61000.00
1914	1	to	Aug 12	200	51000.00	1914	1	to	Aug 12	200	61000.00
1915	1	to	Aug 12	201	51000.00	1915	1	to	Aug 12	201	61000.00
1916	1	to	Aug 12	202	51000.00	1916	1	to	Aug 12	202	61000.00
1917	1	to	Aug 12	203	51000.00	1917	1	to	Aug 12	203	61000.00
1918	1	to	Aug 12	204	51000.00	1918	1	to	Aug 12	204	61000.00
1919	1	to	Aug 12	205	51000.00	1919	1	to	Aug 12	205	61000.00
1920	1	to	Aug 12	206	51000.00	1920	1	to	Aug 12	206	61000.00
1921	1	to	Aug 12	207	51000.00	1921	1	to	Aug 12	207	61000.00
1922	1	to	Aug 12	208	51000.00	1922	1	to	Aug 12	208	61000.00
1923	1	to	Aug 12	209	51000.00	1923	1	to	Aug 12	209	61000.00
1924	1	to	Aug 12	210	51000.00	1924	1	to	Aug 12	210	61000.00
1925	1	to	Aug 12	211	51000.00	1925	1	to	Aug 12	211	61000.00
1926	1	to	Aug 12	212	51000.00	1926	1	to	Aug 12	212	61000.00
1927	1	to	Aug 12	213	51000.00	1927	1	to	Aug 12	213	61000.00
1928	1	to	Aug 12	214	51000.00	1928	1	to	Aug 12	214	61000.00
1929	1	to	Aug 12	215	51000.00	1929	1	to	Aug 12	215	61000.00
1930	1	to	Aug 12	216	51000.00	1930	1	to	Aug 12	216	61000.00
1931	1	to	Aug 12	217	51000.00	1931	1	to	Aug 12	217	61000.00
1932	1	to	Aug 12	218	51000.00	1932	1	to	Aug 12	218	61000.00
1933	1	to	Aug 12	219	51000.00	1933	1	to	Aug 12	219	61000.00
1934	1	to	Aug 12	220	51000.00	1934	1	to	Aug 12	220	61000.00
1935	1	to	Aug 12	221	51000.00	1935	1	to	Aug 12	221	61000.00
1936	1	to	Aug 12	222	51000.00	1936	1	to	Aug 12	222	61000.00
1937	1	to	Aug 12	223	51000.00	1937	1	to	Aug 12	223	61000.00
1938	1	to	Aug 12	224	51000.00	1938	1	to	Aug 12	224	61000.00
1939	1	to	Aug 12	225	51000.00	1939	1	to	Aug 12	225	61000.00
1940	1	to	Aug 12	226	51000.00	1940	1	to	Aug 12	226	61000.00
1941	1	to	Aug 12	227	51000.00	1941	1	to	Aug 12	227	61000.00
1942	1	to	Aug 12	228	51000.00	1942	1	to	Aug 12	228	61000.00
1943	1	to	Aug 12	229	51000.00	1943	1	to	Aug 12	229	61000.00
1944	1	to	Aug 12	230	51000.00	1944	1	to	Aug 12	230	61000.00
1945	1	to	Aug 12	231	51000.00	1945	1	to	Aug 12	231	61000.00
1946	1	to	Aug 12	232	51000.00	1946	1	to	Aug 12	232	61000.00
1947	1	to	Aug 12	233	51000.00	1947	1	to	Aug 12	233	61000.00
1948	1	to	Aug 12	234	51000.00	1948	1	to	Aug 12	234	61000.00
1949	1	to	Aug 12	235	51000.00	1949	1	to	Aug 12	235	61000.00
1950	1	to	Aug 12	236	51000.00	1950	1	to	Aug 12	236	61000.00
1951	1	to	Aug 12	237	51000.00	1951	1	to	Aug 12	237	61000.00
1952	1	to	Aug 12	238	51000.00	1952	1	to	Aug 12	238	61000.00
1953	1	to	Aug 12	239	51000.00	1953	1	to	Aug 12	239	61000.00
1954	1	to	Aug 12	240	51000.00	1954	1	to	Aug 12	240	61000.00
1955	1	to	Aug 12	241	51000.00	1955	1	to	Aug 12	241	61000.00
1956	1	to	Aug 12	242	51000.00	1956	1	to	Aug 12	242	61000.00
1957	1	to	Aug 12	243	51000.00	1957	1	to	Aug 12	243	61000.00
1958	1	to	Aug 12	244	51000.00	1958	1	to	Aug 12	244	61000.00
1959	1	to	Aug 12	245	51000.00	1959	1	to	Aug 12	245	61000.00
1960	1	to	Aug 12	246	51000.00	1960	1	to	Aug 12	246	61000.00
1961	1	to	Aug 12	247	51000.00	1961	1	to	Aug 12	247	61000.00
1962	1	to	Aug 12	248	51000.00	1962	1	to	Aug 12	248	61000.00
1963	1	to	Aug 12	249	51000.00	1963	1	to	Aug 12	249	61000.00
1964	1	to	Aug 12	250	51000.00	1964	1	to	Aug 12	250	61000.00
1965	1	to	Aug 12	251	51000.00	1965	1	to	Aug 12	251	61000.00
1966	1	to	Aug 12	252	51000.00	1966	1	to	Aug 12	252	61000.00
1967	1	to	Aug 12	253	51000.00	1967	1	to	Aug 12	253	61000.00
1968	1	to	Aug 12	254	51000.00	1968	1	to	Aug 12	254	61000.00
1969	1	to	Aug 12	255	51000.00	1969	1	to	Aug 12	255	61000.00
1970	1	to	Aug 12	256	51000.00	1970	1	to	Aug 12	256	61000.00
1971	1	to	Aug 12	257	51000.00	1971	1	to	Aug 12	257	61000.00
1972	1	to	Aug 12	258	51000.00	1972	1	to	Aug 12	258	61000.00
1973	1	to	Aug 12	259	51000.00	1973	1	to	Aug 12	259	61000.00
1974	1	to	Aug 12	260	51000.00	1974	1	to	Aug 12	260	61000.00
1975	1	to	Aug 12	261	51000.00	1975	1	to	Aug 12	261	61000.00
1976	1	to	Aug 12	262	51000.00	1976	1	to	Aug 12	262	61000.00
1977	1	to	Aug 12	263	51000.00	1977	1	to	Aug 12	263	61000.00
1978	1	to	Aug 12	264	51000.00	1978	1	to	Aug 12	264	61000.00
1979	1	to	Aug 12	265	51000.00	1979	1	to	Aug 12	265	61000.00
1980	1	to	Aug 12	266	51000.00	1980	1	to	Aug 12	266	61000.00
1981	1	to	Aug 12	267	51000.00	1981	1	to	Aug 12	267	61000.00
1982	1	to	Aug 12	268	51000.00	1982	1	to	Aug 12	268	61000.00
1983	1	to	Aug 12	269	51000.00	1983	1	to	Aug 12	269	61000.00
1984	1	to	Aug 12	270	51000.00	1984	1	to	Aug 12	270	61000.00
1985	1	to	Aug 12	271	51000.00	1985	1	to	Aug 12	271	61000.00
1986	1	to	Aug 12	272	51000.00	1986	1	to	Aug 12	272	61000.00
1987	1	to	Aug 12	273	51000.00	1987	1	to	Aug 12	273	61000.00
1988	1	to	Aug 12	274	51000.00	1988	1	to	Aug 12	274	61000.00
1989	1	to	Aug 12	275	51000.00	1989	1	to	Aug 12	275	61000.00
1990	1	to	Aug 12	276	51000.00	1990	1	to	Aug 12	276	61000.00
1991	1	to	Aug 12	277	51000.00	1991	1	to	Aug 12	277	61000.00
1992	1	to	Aug 12	278	51000.00	1992	1	to	Aug 12	278	61000.00
1993	1	to	Aug 12	279	51000.00	1993	1	to	Aug 12	279	61000.00
1994	1	to	Aug 12	280	51000.00	1994	1	to	Aug 12	280	61000.00
1995	1	to	Aug 12	281	51000.00	1995	1	to	Aug 12	281	61000.00
1996	1	to	Aug 12	282	51000.00	1996	1	to	Aug 12	282	61000.00
1997	1	to	Aug 12	283	51000.00	1997	1	to	Aug 12	283	61000.00
1998	1	to	Aug 12	284	51000.00	1998	1	to	Aug 12	284	61000.00
1999	1	to	Aug 12	285	51000.00	1999	1	to	Aug 12	285	61000.00
2000	1	to	Aug 12	286	51000.00	2000	1	to	Aug 12	286	61000.00
2001	1	to	Aug 12	287	51000.00	2001	1	to	Aug 12	287	61000.00
2002	1	to	Aug 12	288	51000.00	2002	1	to	Aug 12	288	61000.00
2003	1	to	Aug 12	289	51000.00	2003	1	to	Aug 12	289	61000.00
2004	1	to	Aug 12	290	51000.00	2004	1	to	Aug 12	290	61000.00
2005	1	to	Aug 12	291	51000.00	2005	1	to	Aug 12	291	61000.00
2006	1	to	Aug 12	292	51000.00	2006	1	to	Aug 12	292	61000.00
2007	1	to	Aug 12	293	51000.00	2007	1</				

Thos. W. Edison, Reading Notes

1891		1892		1893		1894		1895		1896		1897		1898		1899		1900		1901		1902		1903		1904		1905		1906		1907		1908		1909		1910		1911		1912		1913		1914		1915		1916		1917		1918		1919		1920		1921		1922		1923		1924		1925		1926		1927		1928		1929		1930		1931		1932		1933		1934		1935		1936		1937		1938		1939		1940		1941		1942		1943		1944		1945		1946		1947		1948		1949		1950		1951		1952		1953		1954		1955		1956		1957		1958		1959		1960		1961		1962		1963		1964		1965		1966		1967		1968		1969		1970		1971		1972		1973		1974		1975		1976		1977		1978		1979		1980		1981		1982		1983		1984		1985		1986		1987		1988		1989		1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		2036		2037		2038		2039		2040		2041		2042		2043		2044		2045		2046		2047		2048		2049		2050		2051		2052		2053		2054		2055		2056		2057		2058		2059		2060		2061		2062		2063		2064		2065		2066		2067		2068		2069		2070		2071		2072		2073		2074		2075		2076		2077		2078		2079		2080		2081		2082		2083		2084		2085		2086		2087		2088		2089		2090		2091		2092		2093		2094		2095		2096		2097		2098		2099		2100								
Sept	24	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																																																																																																																																							
15	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"

Edison Manufacturing Co

1910				1910			
Jan	24	3	Green Bay	N. Y.	5000.00	27	31
	31		Bank	N. Y.	100.00		
Feb	11		Green Bay	N. Y.	5000.00	27	28
March	5		Bank	N. Y.	99.17	Mar	3
					10/199.17		

1910	57	51	dy	Ln	✓	51 ✓	100.00
				hwy dy	✓	52 ✓	500.00
					✓		500.00
Mar	3		Inv	✓	62 ✓		99.17
							10,999.17

Expenses, Repairs, etc.

Sept. 24 Journal
 10/1/30 "
 11/1/30 "

1910
 62 33696.27 Nov. 01 Journal 161 33696.27
 63 10777.72 Dec. 20 Journal 65 10777.72
 67 37941.80 Dec. 31 Journal 100 37941.80

Purchase of Commodities

Apr.	11	20.10.1440 @ 60	74.	1986.00	Apr. 30	Exch. Br. 1896	216	13876.60
	12	16.09 " " "	"	98.00	May 31	" " " 622	237	3462.84
	13	17.05 " " "	70.	1050.00				
	14	22.07 " " "	"	1072.20				
	15	15.47 " " "	74.	928.20				
	16	6.72 " " "	"	415.20				
	21	7.95 " " "	75.	477.00				
	"	11.17 " " "	"	667.20				
	26	14.89 " " "	77.	873.60				
	26	14.16 " " "	"	849.60				
	27	17.17 " " "	"	1080.20				
	28	7.82 " " "	"	469.20				
	30	14.88 " " "	80.	1241.60				
May	6	14.88 " " "	80.	1241.60				
Dec	31	Journal	100.	2000.00				
				13876.60				
June	21	Journal 1500	219	244500	June 15	Journal 1500	216	244500
	30	" 12298	222	808.91	" 30	Exch. Br. 12298	294	81450.4
July	31	" 1872	"	3578.80	" 31	" 1872	"	3578.80
Aug	31	" 823	11	3578.80	Aug 9	Journal 2642	4	1076
Dec	11	Journal	52	3578.80	" 11	" 156	"	35400
				34717.2				3957
June	7	450	115	27900	June 24	582	278	36992
Sept	11	132	121	8544	Sept 30	1992	300	132460
	11	600	154	42000	Dec 31			1493.87
	11	340	186	73800				
	27	542	159	46070				
	"	510	160	43860				
		2574		101274		2574		101274

W.N. Sheldons (Commodity)

Apr.	1	Beer Pay	2.58	610500	Apr.	27	Account of Sheldons	1896	300000
	14	" " "	"	568	Apr.	13	Exch.	" 1908	10500
Oct	2	N 32780	" 98	310500	Oct	14	Exch.	" 1908	319815
						2	Account of Sheldons	" 208	300000
						"	Exch.	" 87	10500
									140515
Oct	31	N 34129	" 94	2031579	Oct	20	Exch.	" 30	2031579
Apr	1	" 35497	" 174	300000	Apr	1	Account of Sheldons	" 95	300000
Oct	1	" 37944	" 27	300000	Oct	9	Exch.	" 164	300000
Dec	31	Ledger #3	285	138856	Dec	31	Exch.	" 176	138856
				2771474					2771474

Wm N. Shalvershire

1910	Apr 1	2, Sunday	171	5154.41	Apr 15	Account Bonded	730	5240.00
	20	"	174	5154.50		Int	740	110.00
			175	5154.92	19	Acc. Bonded	740	5156.00
	May 1	"	176	5155.00		Int	4.00	204.43
	25	"	177	5155.00	Oct 21	Account Bonded	1000	5000.00
1911	Apr 14	"	178	5155.00		Int	100.00	105.00
	2	2, Sunday	179	5155.00		Acc. Bonded	1100	10174.19
	25	"	180	5155.00		Int	100.00	111.25
	25	"	181	5155.00	Apr 14	Account Bonded	1938	71008.19
	25	"	182	5155.00	Oct 2	Account Bonded	238	3000.00
	25	"	183	5155.00	Nov 30	Int & Bond	61	203.16
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E. C. Miller

1910	Apr 1	2, Sunday	171	5154.41	Apr 15	Account Bonded	730	5240.00
	20	"	174	5154.50		Int	740	110.00
			175	5154.92	19	Acc. Bonded	740	5156.00
	May 1	"	176	5155.00		Int	4.00	204.43
	25	"	177	5155.00	Oct 21	Account Bonded	1000	5000.00
1911	Apr 14	"	178	5155.00		Int	100.00	105.00
	2	2, Sunday	179	5155.00		Acc. Bonded	1100	10174.19
	25	"	180	5155.00		Int	100.00	111.25
	25	"	181	5155.00	Apr 14	Account Bonded	1938	71008.19
	25	"	182	5155.00	Oct 2	Account Bonded	238	3000.00
	25	"	183	5155.00	Nov 30	Int & Bond	61	203.16
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N. W. Edison Oxford Quarry, Ark

1910			1910			1910			1910		
Oct. 31	Handries	1864	4532788	Jan. 21	1/2 day	1104	1095551				
Nov. 7	Robertson R.R.	1420	1786624	Nov. 21	"	1674	820246				
Do. (Woods) Bonds	1420	18485	Nov. 27	"	1848	412886					
Dec. 31	"	1548	18281	May 21	"	2118	4122683				
Jan. 31	"	1888	20685	June 20	"	2205	4022643				
Feb. 30	"	1998	21943	July 31	Journal	232	51270				
June 30	"	2228	2516	Oct. 31	Bank	218	5013816				
Aug. 31	"	11	25377	Oct. 30	Drum	33	24422				
			25377				5046712				
Dec. 31	Woods Bonds	188	1050	Dec. 31	Ledger #2	291	1780				

Merchandise Discount

1910			1910			1910			1910		
July 31	Balance	295	275250	Dec. 31	Journal	200	691663				
"	R.R.	138	2620								
Aug. 7	"	141	170								
16	"	142	340								
21	"	145	170								
28	"	146	170								
31	Cash	49	58139								
"	R.R.	147	25749								
Sept. 27	"	159	3067								
30	Cash	65	14125								
Oct. 21	D.L.W.	167	1000								
25	do	168	1850								
31	Cash	85	18838								
Nov. 13	D.L.W.R.	176	2650								
"	do	450	150								
16	do	178	600								
22	do	179	585								
"	do	140	750								
30	Cash	102	65788								
Dec. 9	D.L.W.	176	900								
"	do	"	300								
"	do	"	1510								
"	do	"	5090								
"	Nov. 13	157	3105								
10	D.L.W.	188	750								
14	do	140	450								
"	do	"	150								
"	do	"	100								
"	do	"	650								
20	do	"	100								
23	Cash	117	09								
"	D.L.W.	192	200								
27	do	194	1500								
30	do	"	150								
"	do	195	1550								
31	Cash	119	66246								
			671663								

Notes Received & Discounted

1917		1917		1917		1917	
Aug.	21	Receivable	405	148	2132.27	Aug. 22	612
Sept.	7	1121	158	1014.47	28	"	"
Oct.	9	4374	168	5119.03	"	"	"
18	4173	165	6473.62	Sept. 76	"	"	"
19	4186	166	2634.83	"	"	"	"
Nov.	22	4266	179	2052.140	Oct. 11	"	"
				18	"	"	"
				19	"	"	"
				Nov. 19	"	"	"
				22	"	"	"
				"	"	"	"
				Dec. 6	"	"	"
				8824954		8824954	

Warehouse Collateral Notes

Jan. 21	H. Brown	\$ 2.46 1/2	5000.00	Jan. 24	Carbide & D. Co.	32 1/2	5000.00
"	H. Williams	" 1.50	5000.00	"	"	" 1.50	5000.00
"	H. Brown	" 2.50	5000.00	Feb. 28	"	" 2.41 1/2	5000.00
Feb. 15	E. Miller	\$ 14.50 1/2	10000.00	28	H. Williams	H. Brown 51 1/2	5000.00
Jan. 20	H. Williams	" 5.00	5000.00	Mar. 1	Carbide	Mar. 1 1/2	5000.00
Feb. 24	Do	" 6.15 1/2	5000.00	Feb. 28	"	Mar. 1 9/16	5000.00
Mar. 15	Do	" 8.16 1/2	5000.00	Mar. 16	"	Mar. 1 1/2	5000.00
20	E. C. Miller	" 8.00	10000.00	21	"	Mar. 1 1/2	10000.00
Apr. 15	H. Williams	" 1.00	5000.00	Apr. 18	"	H. Williams 11 1/2	5000.00
20	H. Williams	" 1.00	5000.00	22	"	Carbide 11 1/2	5000.00
			5000.00				5000.00
			5000.00				5000.00

Dexter Bagg.

1942		1943	
Sept. 12	1360 @ 10.156	1360.00	3400 @ 10.300
77	2040 @ 10.160	2040.00	
	3400	3400.00	3400

Rent & Storage.

Jan ¹⁸⁹⁰	31	Journal	168.	61116	Jan ¹⁸⁹⁰ 31 M.C. where	168.	25236
Mar.	31	"	187.	55888	Feb. 21 " " "	166-66	11233
Apr.	30	"	198.	18433	May 31 " " "	1895-1897	10123
June	30	"	222.	25190	June 31 " " "	1898-1901	11734
July	31	"	233.	27163	Aug 30 Journal	1892-4	57594
Aug	31	"	11	29153			
Sept.	30	"	20	31970			
Oct.	31	"	55.	31238			
Nov.	30	"	48.	36558			
Dec.	30	"	62	12847			
Jan ¹⁸⁹¹	31	Journal	73.	12440	Nov. 27 M.C. where	1891	69086
Feb.	29	"	92.	14474	Dec 31 " " "	1891	71446
Mar.	30	"	82.	16386	" " " "	1898	13444
Apr.	30	"	102.	17374	" " " "	1898	34655
May	31	"	112.	18416	Journal	300.	
June	29	"	124.	24386			
July	12	"	131.	24440			
	31	"	138.	25440			
	"	"	"	27128			
Sept.	12	"	156.	33897			
Oct.	29	"	4206	170			
				27711			5745

Norton & Kemerovay Storage

[illegible]

7.7. 7.2. 8.2. Storage

Mar	51	1000	0. 655	187.	65500	May	51	1000	0. 655	212.	65500
Apr	30	340	"	646	178.	"	"	240	"	646	"
May	31	1050	"	626	212.	21264	"	254	"	626	"
June	22	340	"	646	219.	21264	June 30	340	"	646	225.
"	"	510	"	668	225.	51003	"	575	"	626	"
July	51	510	"	646	251.	20876	July 51	152	"	832.	"
Aug	31	514	"	59	12.	51403	"	193	"	668	"
Sept	30	650	"	589	20.	65032	Aug 31	247	"	12.	"
Oct	51	650	"	56	54.	56580	"	152	"	646	"
Nov	30	1530	"	568	48.	56700	Sept 30	185	"	20.	"
Dec	30	945	"	"	62.	36036	"	510	"	59.	"
Jan	31	170	"	"	73.	7656	Oct 31	135	"	589	"
Feb	29	650	"	"	82.	56224	Nov 30	330	"	35.	"
Mar	30	850	"	574	73.	57490	Dec 31	1540	"	45.	"
Apr	30	850	"	575	102.	57504	Jan 30	650	"	56.	"
May	31	1230	"	587	115.	58740	"	664	"	568.	"
June	30	920	"	578	116.	57850	Feb 30	1120	"	"	62.
July	31	1120	"	585	139.	58544	Mar 31	2270	"	"	73.
Aug	31	888	"	589	149.	58978	Apr 29	812	"	82.	"
Sept	30	760	"	585	161.	58512	May 30	3444	"	"	72.
Oct	31	850	"	575	171.	57560	June 30	574	"	"	1255.
Nov	30	238	"	583	187.	58340	July 30	6004	"	103	"
Dec	31	360	"	666.	"	66604	Aug 30	238	"	575.	"
Jan	31	640	"	639	197.	63960	May 31	1534	"	115.	"
							June 30	1166	"	583.176.	68007
							"	337	"	575.176.	1926
							July 31	1075	"	575.160.	288043
							Aug	312	"	150.	18077
							"	158	"	588	"
							Sept	244	"	589	"
							30	553	"	161.	"
							Oct	217	"	588	"
							31	524	"	4. 178.	29091
							"	1448	"	69	"
							Nov	1434	"	4. 173.	28583
							"	1464	"	664	"
							Dec	238	"	583.197.	11694
							"	181	"	664	"
							"	111	"	664	"
							31	1495	"	223	22723

New England Storage Expenses

1911	Ac. 481 1631 23	1912	Ac. 481 1631 23	1913	Ac. 481 1631 23	1914	Ac. 481 1631 23	1915	Ac. 481 1631 23
May	1	Anten & Co. 200	17576	May 31	Sal. Reg.	187	891128		
	2	W. C. Smith 200	25320	June 31	"	208	86868		
	10	W. C. Smith 200	29932	July 31	"	227	151178		
	25	W. C. Smith 200	14040	Aug 31	"	26	278955		
	29	W. C. Smith 200	24474	Sept 30	"	49	831187		
	29	W. C. Smith 200	1904	Oct 31	"	69	872255		
		"	6998	Nov 10	Balance		268567		
		"	12317						
		"	48895						
		"	11952						
	30	W. C. Smith 200	1170						
June	10	W. C. Smith 200	2854	215					
	"	W. C. Smith 200	2855						
	19	W. C. Smith 200	2897	217					
	"	W. C. Smith 200	2898	218					
	22	W. C. Smith 200	29						
	28	W. C. Smith 200	2914	220					
	30	W. C. Smith 200	2924	221					
July	6	W. C. Smith 200	2926	225					
	13	"	"	"					
	17	W. C. Smith 200	228						
	24	W. C. Smith 200	229						
	"	W. C. Smith 200	"						
	26	W. C. Smith 200	250						
	29	W. C. Smith 200	2911	250					
Aug	8	"	3009	2					
	16	W. C. Smith 200	5						
	18	W. C. Smith 200	5064	6					
	"	W. C. Smith 200	"						
	25	W. C. Smith 200	5087	5					
	29	W. C. Smith 200	5094	9					
Sept	9	"	5107	14					
	22	"	5150	16					
	25	W. C. Smith 200	5171	18					
Oct	6	W. C. Smith 200	5180	25					
	7	W. C. Smith 200	5189	25					
	"	W. C. Smith 200	5188						
	15	W. C. Smith 200	5244	27					
	"	W. C. Smith 200	5245	28					
	18	W. C. Smith 200	5244	29					
	20	W. C. Smith 200	5244	30					
	24	W. C. Smith 200	5244	31					
	26	W. C. Smith 200	5274	32					
	31	W. C. Smith 200	5274	33					
Nov	3	"	5274	35					
	10	W. C. Smith 200	5274	39					
	"	"	5274	41					

New England Stock Expense

1911	Ac. 481 1631 23	1912	Ac. 481 1631 23	1913	Ac. 481 1631 23	1914	Ac. 481 1631 23	1915	Ac. 481 1631 23
Nov	10	Balance	268567	Nov 30	Sal. Reg.	85	109997		
	15	W. C. Smith 200	36	41					
	16	W. C. Smith 200	3345	42					
	"	"	625						
	"	"	2449						
	22	W. C. Smith 200	3355	45					
	23	W. C. Smith 200	3357						
	"	W. C. Smith 200	46						
	27	W. C. Smith 200	3373						
Dec	9	W. C. Smith 200	3384	52					
	11	W. C. Smith 200	3390	54					
	14	W. C. Smith 200	3425	54					
	21	W. C. Smith 200	3442	56					
	"	W. C. Smith 200	3447	57					
			467569						

Blanc Stainless Cement.

1911		1912		1913		1914	
Aug. 16.	50 5	15000	Aug. 31	Labels Reg. 324 299.	12255.		
31 Sticks	11	3040	Sept 30	" " 262	9712		
Sept 9 "	40 15	42000	Oct 31	" " 5	1000		
Nov 24 "	25 46	47300	Nov 29	" " 142300.	27370		
Dec 30 Sticks	49	47500	Dec 30	" " 82	3230		
Jan 6 "	35 86	43500	Jan 30	" " 8	3240		
Jan 30 Sticks	93	51200	Feb 28	" " 4	3120		
Dec. 31 P.R.L.	200	51200	Mar 30	" " 4	3120		
		51200	Apr 30	" " 164	5740		
				Chas. ✓	5740		
	150	56269		150	56269		

Blanc Bags

1911		1912		1913		1914	
Aug. 16	200 5	1000	Aug. 31	129 299	245		
Sept 9	160 15	800	Sept 30	106	520		
Nov 24	100 46	500	Oct 31	20	120		
Jan 6	142 56	100	Nov 29	58 300	200		
			Dec 30	34	120		
			Jan 30	32	120		
			Feb 29	16	120		
			Mar 30	14	120		
			Apr 30	145	200		
			Dec. 31	Journal	200		
				Chas. 4	200		
	600	3000		600	3000		

Dr. & Debit Receipts

1911		1911	
Oct 31	20 21 22 23 24 25	Oct 31	26 27 28 29 30
Nov 31	105 536 72	Nov 31	105 536 72
		Dec 31	105 536 72
		Jan 31	105 536 72
		Feb 29	105 536 72
		Mar 29	105 536 72
		Apr 30	105 536 72
		May 31	105 536 72
		June 30	105 536 72
		July 31	105 536 72
		Aug 31	105 536 72
		Sept 30	105 536 72
		Oct 31	105 536 72
		Nov 30	105 536 72
		Dec 31	105 536 72
			105 536 72

Thos. A. Edison, N.Y. & Co. (N.Y. & Co.)

1911		1911	
Oct 31	N. 34133	Oct 31	N. 34133
		Nov 31	N. 34133
		Dec 31	N. 34133
		Jan 31	N. 34133
		Feb 29	N. 34133
		Mar 29	N. 34133
		Apr 30	N. 34133
		May 31	N. 34133
		June 30	N. 34133
		July 31	N. 34133
		Aug 31	N. 34133
		Sept 30	N. 34133
		Oct 31	N. 34133
		Nov 30	N. 34133
		Dec 31	N. 34133
			N. 34133

Thos. G. Edison (copy of)

Oct. 31. N. 341/22	6 1/2	121250.25	Oct 31	Boundaries	33 1/2	21250.25
Apr. 4. " 36022	19 1/2	227700.00	Apr 4	Harry Campbell	95 1/2	227700.00
Oct. 1. " 37942	27	227700.00	Oct 9	do	164	227700.00
		166779025				166779025

Thos. G. Edison (copy of)

Jan. 27. " 85332	84 1/2	500000.00	Jan 23	Cash	79 1/2	250000.00
Feb. 2. " 35309	86 1/2	500000.00	Mar 8	Subst. Asset	86 1/2	500000.00
8. " 35348	87 1/2	500000.00	Apr. 24	Cash	319	300000.00
16. " 35556	92 1/2	500000.00	May 15	Subst. Asset	107 1/2	83333.33
24. " 35561	94 1/2	500000.00	25. " "		110	55555.56
Mar. 6. " 35673	95 1/2	500000.00	June 17. " "		120	55555.56
May 11. " 36317	106 1/2	500000.00	July 23. " "		133	55555.56
15. " "	127 1/2	500000.00				
28. " 36437	134 1/2	500000.00				
18. " 36630	74	500000.00				
July 27. " 37115	76	500000.00				
3. " "	72	500000.00				
" " "	"	500000.00				
" " "	"	500000.00				
		5568832				5568832

Thos. G. Edison's Advances.

Month	Day	Year	Amount	Balance
May	23	1863	73	75
Dec	31	1863	288	98
Mar	2	1864	16	114
Apr	16	1864	20	134
May	2	1864	16	150
June	12	1864	16	166
July	18	1864	16	182
Aug	3	1864	33	215
Sept	16	1864	16	231
Oct	17	1864	16	247
Nov	8	1864	88	335
Dec	5	1864	104	439

Mortgage Payable

Dec	31	Ledger #3	261	250000	1917	109	250000
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EDISON-SAUNDERS COMPRESSED AIR COMPANY RECORDS

The Edison-Saunders Compressed Air Co. was incorporated in the State of New Jersey on April 18, 1899, in order to acquire, control, and develop Edison's patents for reheating compressed air. It also assumed the rights to a patent relating to the efficiency of motor fluids, which had been granted jointly to William L. Saunders and the Ingersoll-Sergeant Drill Co. in 1892. At the time of incorporation, Richard N. Dyer served as president; William Pelzer, as vice president; and Archibald G. Reese, as secretary and treasurer. At a meeting of stockholders, held at the West Orange laboratory on April 24, 1899, Edison was elected president; William L. Saunders, vice president; and Walter S. Mallory, secretary and treasurer.

The records consist of the minutes from one meeting of stockholders and a book of stock certificates and receipts. Only the minutes have been selected. A finding aid for the archival record group is available at the Edison National Historic Site. Related material can be found in the "Edison-Saunders Compressed Air Company" folders for 1899 and 1901 in the Document File Series, as well as in the letterbooks of Walter S. Mallory in the New Jersey and Pennsylvania Concentrating Works Records (*Thomas A. Edison Papers: A Selective Microfilm Edition, Part III*).

Minutes (1899)

This volume consists of minutes from the first meeting of the company's stockholders, held at the West Orange laboratory on April 24, 1899. The document concerns the election of officers, as well as the adoption of a certificate of organization and bylaws. Included are copies of letters from Edison, William L. Saunders, and the Ingersoll-Sergeant Drill Co. The correspondence pertains to the assignment of Edison's patent for reheating compressed air and Saunders's patented method for improving the efficiency of motor fluids.

Stock Book (1899) [not selected]

This volume covers the period 1899. It contains stock certificates and receipts for shares issued to Edison, Richard N. Dyer, Walter S. Mallory, William Petzer, and William L. Saunders.

**Edison-Saunders Compressed Air Company Records
Minutes (1899)**

This volume consists of minutes from the first meeting of the company's stockholders, held at the West Orange laboratory on April 24, 1899. The document concerns the election of officers, as well as the adoption of a certificate of organization and bylaws. Included are copies of letters from Edison, William L. Saunders, and the Ingersoll-Sergeant Drill Co. The correspondence pertains to the assignment of Edison's patent for reheating compressed air and Saunders's patented method for improving the efficiency of motor fluids. The front cover is labeled "Minute Book -of- Edison-Saunders Compressed Air Company." The book contains 153 numbered pages; it has been used to page 16.

12
First meeting of the Stockholders of the Edison-
Swinden Compresed Air Company, held the
24th day of April, 1899 at 3.30 o'clock in the after-
noon, at the Edison Laboratory, West Orange, N.J.

Present
Richard A. Dyer
William Cilgen
Archibald G. Reese

The meeting was called to order. On motion,
Richard A. Dyer was elected Chairman and
William Cilgen, Secretary.

The Certificate of Organization and Minutes of
Notice of first meeting were read, and, on motion,
were ordered to be spread upon the minutes.

The Certificate of Organization is as follows:-

This is to Certify, That Mr. Richard A. Dyer,
William Cilgen, and Archibald G. Reese, do hereby
associate themselves into a corporation, by virtue
of the provisions of an act of the Legislature of New
Jersey, entitled "An Act Concerning Corporations"
(revision of 1896) approved April 21st, 1896, and the
several supplements thereto for the purposes hereinbefore
mentioned, and to that end we do by this our certificate
act forth.

First- The name of the corporation is "Edison-

"Saunders Compressed Air Company."

Second.

The location of the principal office in this state is at the Edison Laboratory, Valley Road, West Orange, in the County of Essex.

The name of the agent therein and in charge thereof, upon whom process against this corporation may be served is, Weston S. Mallory.

Third.

The objects for which the said corporation is formed are to purchase or otherwise acquire, and to hold, own, use, operate, and to sell, assign or otherwise dispose of, to grant licenses in respect of or otherwise turn to account, any and all patents, inventions, improvements and processes used in connection with or relating to the production or utilization of compressed air, and with a view to the developing of the same, to carry on any other business, whether manufacturing or otherwise, which the corporation may think calculated, directly or indirectly, to effectuate these objects, also to purchase, take on lease or in exchange, hire or otherwise acquire, any real or personal property and any rights or privileges which the Company may think necessary or convenient for the purposes of its business.

Fourth.

The total amount of the capital stock is Ten Thousand dollars, the number of shares into which the same is divided is One Hundred ⁽¹⁰⁰⁾ and the par value

of each share is one Hundred dollars ⁽¹⁰⁰⁾. The amount with which said corporation will commence business is One Thousand dollars ⁽¹⁰⁰⁾, which is divided into Ten shares of the par value, of one Hundred ⁽¹⁰⁰⁾ dollars each.

Fifth.

The names and residences of the incorporators and the number of shares subscribed for by each, are as follows, to wit:

Richard H. Byers, East Orange, N. J. Four ⁽⁴⁾ Shares.
William Elber, New York City, N. Y. One ⁽¹⁾ Share.
Nicholas G. Rose, New York City, N. Y. Five ⁽⁵⁾ Shares.

Sixth.

The existence of the corporation shall begin on the twenty-fourth day of April, in the year Eighteen Hundred and Nineteen, and shall continue for the term of Fifty years.

In Witness Whereof, we have hereunto set our hands and seal the 18th day of April, Eighteen Hundred and Nineteen.

Against, Asks and Aliances } Richard H. Byers (seal)
in the presence of } William Elber (seal)
J. O. Edmonds } Nicholas G. Rose (seal)

State of New York } ss.
City and County of New York }

At it remembered, That on this eighteenth day of April, in the year of our Lord

Do. Thomey Eight Hundred and ninety-nine
before me the undersigned, a Commissioner of Deeds
for the State of New Jersey in New York personally
appears Richard H. Dyen, William P. Hays and
Archibald S. Reese, who then testified are
the persons named in and who executed the
foregoing Certificate of Incorporation, and
having first made known to them the
contents thereof, they severally acknowledged
that they signed, sealed and executed the same
as their voluntary act and deed, for the uses
and purposes therein expressed.

In witness whereof I have hereunto set my
hand and affixed my official seal this 18th day of
April A.D. 1899.

Charles Edgar Mills (act)
Commissioner of Deeds for New Jersey in New York
City, N.Y. 115 & 117 Broadway, N.Y. City.

Received in the Clerk's Office of the County of Essex,
on the 19th day of April, A.D. 1899 and recorded in
Book 16 of Gr. Ben. Co. for said County, Page 235
William C. Hadden, Clerk.

Filed Apr. 22/99

George Wurt
Secretary of State.

Following is a copy of Minutes of
First Meeting.

We, the undersigned, being all the parties named in
the certificate of organization, of Edison-Sanders
Compressed Air Company hereby give notice of the
time, place and purposes of the first meeting of
said company, and do give this Twenty-fourth
day of April eight hundred and ninety-nine
at 3.30 o'clock in the afternoon at the Hyge and
Edison Laboratory, Valley Road, in the Township
of West Orange in the County of Essex and State
of New Jersey, as the place of the first meeting of
said Company.

Dated April 24/99.

Richard H. Dyen
William P. Hays
Archibald S. Reese

The following By-Laws were then adopted:
By-Laws of the Edison-Sanders Compressed Air Company

I

Directors

The number of Directors shall be five, who shall
be elected by the stockholders at their regular
annual meetings and two Directors shall form a
quorum.

Officers

The officers of the Company shall be a President,
a Vice President, and a Secretary and Treasurer,
who shall be elected by the Board of Directors,
and shall hold their respective offices for one
year and until their successors shall be

elects. The office of Secretary and Treasurer may be held by one person.

- 3 -

Minor Officers The Board of Directors shall have the power of appointing such other minor officers and agents as they shall deem advisable, and may delegate their power to the President.

- 4 -

Salaries The Board of Directors shall fix the salaries of all officers and agents of the Company.

- 5 -

Treasurer Treasuries among the Officers or Directors shall be filled by the Board of Directors.

- 6 -

Meetings The Board of Directors shall regularly meet on the first Tuesday in March, June, September, and December, in each year. A special meeting shall be called by the President at the request of two directors, and two days' notice shall be given of the same, by mail to the post-office address of each director.

- 7 -

Annual Meeting of Stockholders An annual meeting of stockholders for the election of Directors shall be held at West Orange on the first Monday of March of each year at three o'clock noon, and the polls shall remain open for one hour. Notice of each election shall be given by the Secretary, by mailing a notice to each stockholder, at least five days before each meeting, addressed to the last known post-office

address of each stockholder.

- 8 -

Dividends The Board of Directors shall have the power to declare dividends semi-annually, out of the net profits of the Company.

- 9 -

Certificate of Stock Stock of the Company shall be transferred only on the stock certificate book of the Company, and shall be signed by the President and Counter-signed by the Cashier, and the seal of the Company shall be affixed thereto.

- 10 -

Seal The seal of the Company shall contain the corporate name of the Company, arranged in a circle and the words "Incorporated 1899 New Jersey" arranged within the circle.

- 11 -

By-Laws The By-Laws may be altered or amended by a two-thirds vote of those present at any meeting of the Board of Directors.

Moved and seconded that the meeting proceed to the election of Directors.

Motion Carried.

The meeting then proceeded to the election of Directors, and Richard H. Ogden, William Ogden and Archibald G. Reed, were elected Directors.

On motion, the meeting adjourned.

Wm. B. Reed
Secretary

First meeting of the Directors of the Edison-Saunders Compensated Air Company held this 24th day of April, 1899 at 3.45 o'clock in the afternoon, at the Edison Laboratory, West Orange, N.J.

Present

Richard H. Ogden

William Phipps

Archibald F. Keen

The meeting was called to order, and Richard H. Ogden was elected Chairman, and William Phipps Secretary.

Moved and seconded that the meeting proceed to the election of officers for ensuing year.

Motion Carried.

The meeting then proceeded to the election of officers, and the following officers were elected:— Richard H. Ogden, President; William Phipps, Vice-President; Archibald F. Keen, Secretary and Treasurer.

The Statutory oath was then admin. in virtue to the Secretaries.

Moved and seconded that an assessment of 100% be levied on the stock already subscribed.

Motion Carried.

The Treasurer reported that an assessment of 100% on the stock already subscribed had been paid in full.

Moved and seconded that the Treasurer be

authorized to purchase the necessary books and stationery, and to defray the expense of incorporation.

Motion Carried.

The following offer from Thomas A. Edison was then read and ordered placed upon the minutes:—

"West Orange, N.J., April 24th, 1899.

To the Directors of
Edison-Saunders Compensated Air Company
Gentlemen,

I am the owner of an invention relating to a new and useful method of and apparatus for Re-heating Compensated Air for Industrial purposes, upon which invention I applied to the U. S. Patent Office, for a patent, such application having been filed February 27th, 1899, Serial No. 706,976, and I have also applied for a British patent upon the same invention.

I offer to sell to you, for the sum of seven thousand five hundred dollars (\$7,500), payable seven hundred and fifty dollars (\$750) in cash and six thousand seven hundred and fifty dollars (\$6,750) in stock of your Company at par value, all my right, title and interest in and to said invention in and for the United States and Great Britain, and in and to the United States and British patents which may be granted on the said applications.

Yours truly
Thomas A. Edison

Moved and recorded that the offer of Thomas A. Edison, be accepted, and that the officers of the Company be authorized to pay over to Mr. Edison the sum of \$750. in cash and issue Stock to him for the par value of \$6750, upon the execution by Mr. Edison to the Company of proper instrument of transfer.

Motion Carried.

The following offer from William L. Saunders was then read and ordered spread upon the minutes:-
"New York, April 24th 1899.

To the Directors of
Edison-Saunders Compresse Air Company,
Gentlemen,

I am the owner of a half interest in United States patent No. 486,411, granted November 15, 1892, upon my invention relating to a Method of Increasing the Efficiency of Motor Fluids, and I am also the owner of a half interest in British patent No. 20676 of the year 1892, granted upon the same invention. I offer to sell to you, for the sum of two thousand five hundred dollars (\$2,500), payable two hundred and fifty dollars (\$250) in cash and two thousand and fifty dollars (\$2,250) in stock of your Company at par value, all my right, title and interest in and

to the said United States and British patents.

Yours truly
William L. Saunders

Moved and recorded that the offer of William L. Saunders be accepted, and that the officers of the Company be authorized to pay over to Mr. Saunders the sum of \$2,250. in cash and issue Stock to him for the par value of \$2,250, upon the execution of proper instrument of transfer transferring his half interest in said patents to the Company.

Motion Carried

The following offer from The Ingersoll-Rand Corp. was then read and ordered spread upon the minutes:- "New York, April 24th 1899.

To the Directors of
Edison-Saunders Compresse Air Company,
Gentlemen,

We are the owners of a half interest in United States patent No. 486,411, granted November 15, 1892, upon the invention of William L. Saunders relating to a new Method of Increasing the Efficiency of Motor Fluids, and we also own a half interest in British patent No. 20676 of the year 1892, granted upon the same invention. We understand that your Company is to purchase,

the other half interest in these patents from Mr. William K. Saunders, and also that your Company is to purchase the entire interest from Mrs. Thomas A. Edison, for the United States and Great Britain in an invention recently made by him relating to a Method of and Apparatus for heating compressed air for industrial purposes, upon which Mr. Edison applied for a United States patent February 27, 1889, Serial No. 706,976, and upon which he has also applied for a British patent. We offer to sell you our one-half interest in the Saunders United States and British patents referred to in consideration that our Company shall have the exclusive right and license in the United States and England, under the said Saunders patents and under the patents which may be granted upon the invention referred to made by Mr. Edison, to make use and sell in those countries apparatus embodying or employing said invention, such right and license, to be restricted to the use of said inventions for mines, tunnels and quarries and to be conditioned upon the payment of a royalty, the amount of which shall be agreed upon between the officers of the Company and the officers of your Company, and such license not to be transferable.

Yours truly,
The Ingersoll-Sergeant & Co. Company
By William L. Saunders
"Vice-President."

Moved and seconded that the offer of The Ingersoll-Sergeant & Co. Company be accepted, and that the officers of this Company be authorized and directed to enter into an agreement with the Ingersoll-Sergeant & Co. Company in conformity with the offer of that Company, upon the execution of proper instruments of transfer transferring the half interest owned by the Ingersoll-Sergeant & Co. Company in the Saunders United States and British patents to this Company.

Motion Carried.

Moved and seconded that the Treasurer of the Company be authorized to sign and endorse all checks for the Company.

Motion Carried.

Respect N. Over, then tendered his resignation as President and director of the Company, to take effect at the adjournment of the present meeting.

On Motion, his resignation was accepted.

Moved and seconded that the Board proceed to the election of a Director to fill the vacancy in the Board.

Motion Carried.

The meeting then proceeded to the election of a Director to fill the vacancy in the Board, and Thomas A. Ellison was elected a Director.

Moved and seconded that the meeting proceed to the election of a President to fill the vacancy caused by the resignation of Mr. Byers.
Motion Carried.

The meeting then proceeded to the election of a President, and Thomas A. Ellison was elected President.

Archibald G. Rave then tendered his resignation as Secretary, and Treasurer, and Director of the Company, to take effect on the adjournment of the present meeting.

On motion Mr. Rave's resignation as Secretary, and Treasurer, and Director was accepted.

Moved and seconded that the meeting proceed to the election of a Director to fill the vacancy in the Board.

Motion Carried

The meeting then proceeded to the election of a Director to fill the vacancy in the Board, and Walter P. Malony was elected Director.

Moved and seconded that the meeting proceed

to the election of a Secretary, and Treasurer, to fill the vacancy caused by the resignation of Mr. Rave.

Motion Carried.

The meeting then proceeded to the election of a Secretary, and Treasurer, and Walter P. Malony was elected Secretary, and Treasurer.

It will then be remembered that his resignation as Vice-President of the Company, and as a Director, to take effect on the adjournment of the present meeting.

On motion, his resignation was accepted.

Moved and seconded that the Board proceed to elect a director to fill the vacancy in the Board.

Motion Carried.

The Board then proceeded to elect a Director to fill the vacancy in the Board, and William L. Saunders was elected Director.

Moved and seconded that the meeting proceed to the election of a Vice-President to fill the vacancy caused by the resignation

of Mr. Rogers
Motion Carried.

The meeting then proceeded to the election
of a Vice-President and William L. Saunders
was elected Vice-President.

On motion, the meeting adjourned.

Archibald P. Rice
Secretary.

EDISON STORAGE BATTERY COMPANY RECORDS

The Edison Storage Battery Co. (ESBCo) was organized in New Jersey on May 27, 1901, in order to develop, manufacture, and sell Edison's alkaline storage battery. Edison served as the company's first president; Walter S. Mallory, as vice president; and John F. Randolph, as secretary and treasurer. The company was initially capitalized at one million dollars. The capitalization was increased to \$3.5 million in 1910 and to \$5 million in 1917, largely to reduce the company's indebtedness to Edison, who financed much of the battery research. Commercial manufacture of a nickel-iron battery began in January 1903 but was suspended on November 1, 1904, when the "E" cells suffered reduced electrical capacity and leakage. After technical improvements to the production process and to the battery itself, beginning with the "A" cell, commercial manufacture resumed in 1909.

Chemicals for the batteries were manufactured in Silver Lake, New Jersey, and the batteries themselves were assembled nearby, first in Glen Ridge and later in West Orange. Despite increased orders and production, the company did not realize a net profit until 1913, due largely to its research budget and indebtedness. Research and development were performed by ESBCo's own Research Department, as well as at Edison's laboratory in West Orange. Product lines and sales structures were expanded throughout the company's history. Batteries were manufactured for mining lamps, train lighting and signaling, submarines, electric vehicles, and other uses. ESBCo had its own sales force, but it also sold batteries through separate sales companies, including one Edison company—the Edison Storage Battery Supply Co. (formed in 1913)—and non-Edison companies such as Miller Reese Hutchison, Inc. (formed in 1916). Foreign sales rights were controlled at different times by various agents, including Herman E. Dick, Paul H. Cromelin, Maurice E. Fox, and John F. Monnot. After Edison's death the company was merged into Thomas A. Edison, Inc.

The records are arranged in four series: (1) Administrative Records; (2) Financial Records; (3) Plant Operations and Research Records; and (4) Sales Records. A finding aid for the archival record group is available at the Edison National Historic Site. Related documents can be found in the Notebook Series, Document File Series, and Richard W. Kellow and Harry F. Miller files in the Legal Series.

Administrative Records. These records consist of incoming and outgoing correspondence, memoranda, agreements, and other material pertaining to the administration of ESBCo. The selected records are arranged in the following order: (1) correspondence (1901-1931); (2) corporate documentation (1901-1924); and (3) letterbook (1904-1916). Among the items not selected are the minutes of the Executive Committee meetings for the period 1916-1918.

Financial Records. These records consist of bound ledgers and journals and unbound statements. The selected records are arranged in the following order: (1) annual statements (1911-1916); (2) general ledgers (1901-1917); and (3) journals (1901-1917). Among the items not selected are two journals (1920-1921); a journal of the Edison Storage Battery Garage, Inc. (1919-1926); a cash book pertaining to the Darby Mine (1905-1907); and numerous monthly statements.

Plant Operations and Research Records. These records consist of unbound and bound material relating to plant operations at ESBCo factories and to research and development done on behalf of ESBCo by its own Research Department and by Edison's West Orange laboratory. The selected items are arranged in the following order: (1) operations reports (1905-1924); (2) research reports (1901, 1914-1923); and (3) research notebook (1901-1903). Among the items not selected are an unfilled orders notebook (ca. 1901-1902); eight receiving books (1901-1916); an automobile test book (1902); five payroll abstract books (1911-1917); six plant operations log books (1920-1921); and graphs showing the performance of batteries used in automotive starters (1922-1930).

Sales Records. These records consist of reports, correspondence, and printed material pertaining to the sales organization of ESBCo. The documents relate to the salesmen and operations of ESBCo as well as to relations with the Edison Storage Battery Supply Co. and Miller Reese Hutchison, Inc. The selected items are arranged in the following order: (1) daily and monthly sales reports (1910-1924); and (2) documents relative to the business of Miller Reese Hutchison, Inc. (1911, 1916-1918). Among the items not selected are a scrapbook of advertisements and promotional articles (1912-1914) and two in-house publications—*Storage Battery Transportation* and *Storage Battery Power* (1928-1958).

EDISON STORAGE BATTERY COMPANY RECORDS ADMINISTRATIVE RECORDS

These records consist of incoming and outgoing correspondence, memoranda, agreements, and other material pertaining to the administration of ESBCo. The unbound correspondence is organized chronologically by decade as follows: 1901-1910, 1911-1920, and 1921-1931. The corporate documentation (1901-1924), also organized chronologically, includes agreements, drafts of agreements, certificates, mortgages, a federal tax filing, and other official documents generated by ESBCo. There is also a letterbook covering the period 1904-1916.

The following categories of documents have been selected: correspondence regarding Edison's participation in, or oversight of, ESBCo administration; letters providing an overview of corporate organization or policies; agreements signed by Edison and drafts authored by him; official documents that detail the financial and administrative organization of the company.

The following categories of documents have not been selected: Executive Committee minutes; correspondence regarding routine details of purchasing, sales, accountancy, and other daily operations; unsigned agreements; patent assignments; letters of transmittal and acknowledgment; items that duplicate information in selected material.

The selected records are arranged in the following order: (1) unbound correspondence; (2) corporate documentation; and (3) letterbook.

Correspondence (1901-1910)

This folder contains documents, primarily correspondence, relating to the business of ESBCo. Included are letters pertaining to the construction of the ESBCo works, corporate finance, real estate, chemical production, the supply and performance of "E" cells, and relations with manufacturers of electric vehicles. Correspondents include Edison, Walter S. Mallory, and William G. Bee of ESBCo; Investors J. Wesley Allison, Arthur I. Clymer, and James Gaunt; and John Jacob Astor, Herman E. Dick, James Gayley, and Willis N. Stewart. Most of the outgoing letters are tissue copies of correspondence authored by Allan H. Whiting, sales manager of ESBCo. Some of the items deal with supplies available from the United States Steel Corp., the North American Rubber Co., the American Briquetting Machinery Co., and Edison's own New Jersey and Pennsylvania Concentrating Works. Other letters relate to the electric vehicles sold by the Pope, Baker, and Studebaker companies and to Edison's search for an inexpensive supply of cobalt ore. Also included is a 1903 paper entitled "The Edison Accumulator for Automobiles," delivered by W. Hibbert to the Institution of Electrical Engineers in London.

Correspondence (1911-1920)

This folder contains documents, primarily correspondence, relating to the business of ESBCo. Included are letters pertaining to the outfit and supply of the ESBCo works, corporate finance, and the production and sale of batteries and by-products. Correspondents include Edison, Charles Edison, Robert A. Bachman, Donald M. Bliss, Miller Reese Hutchison, Stephen B. Mambert, Arthur Mudd, C. E. Sholes, and other ESBCo employees; investors Arthur I. Clymer, and William D. Sloane; and Frederick A. Hall, an efficiency engineer associated with Frank B. Gilbreth. Some of the items deal with supplies available from the Sangamo Electric Co., the Troy Electric Co., and the Quigley Furnace & Foundry Co. Other documents relate to the foreign sales of Edison storage batteries; the specifications for batteries required by the U.S. Navy; a sales company called the Transportation Engineering Corp., organized by one-time ESBCo employee, H. G. Thompson; and the development of an automotive starter by the Tidewater Equipment Co. Also included are memoranda and conference minutes summarizing the staffing and structure of the Engineering Department, Research Department, and Tube Inspection and Assembly Department; and an insurance report from 1918 providing the layout of the ESBCo manufacturing plant in West Orange.

Correspondence (1921-1931)

This folder contains documents, primarily correspondence, relating to the business of ESBCo. The documents cover the period from 1921 until after Edison's death, but the bulk of the material is from 1921-1924. Included are letters pertaining to the sale of Edison storage batteries, the real estate and capital of the company, and the processes of production, accountancy, and administration. Correspondents include Edison, Charles Edison, H. A. Altengarten, Frank D. Fagan, Stephen B. Mambert, Arthur Mudd, C. E. Sholes, and other ESBCo employees. Some of the items relate to sales agents Maurice E. Fox and John F. Monnot, to the Edison Storage Battery Supply Co.'s contract with the American Railway Express Co., to royalties collected from the Deutsche Edison-Accumulatoren Co., and to service guarantees granted to ESBCo customers. There are also memoranda concerning employees under Edison's direction and relations between ESBCo and the phonograph and primary battery divisions of Thomas A. Edison, Inc. Related material can be found in the Plant Operations and Research Records.

Corporate Documentation (1901-1924)

This folder contains agreements, minutes, certificates, and other official documents pertaining to the formation and activities of ESBCo. There are also draft versions of official agreements, which Edison helped to prepare. Included are items relating to the organization of the company in 1901, to increases in its capitalization in 1910 and 1917, to mortgages obtained, and to sales agreements executed with the Lansden Co., F. J. Lisman & Co., and others. Some of the documents concern agreements that ESBCo signed in 1912 with the General Vehicle Co. and the Hartford Electric Light Co. for supplying, charging, and maintaining storage batteries in electric vehicles. Also included are meeting announcements with marginal notations by Edison; minutes of individual meetings; three addresses delivered at stockholders' meetings; and a 1919 filing for the Internal Revenue Service regarding the assets and liabilities of ESBCo and the valuation of Edison's patents. Related material can be found in the Harry F. Miller and Richard W. Kellow Files (Legal Series).

Letterbook (1904-1916)

This letterbook covers the period June 1904-November 1916. Many of the early letters are by Walter S. Mallory, vice president of ESBCo. Many of the later letters are by Harry F. Miller, who served as secretary and then as treasurer of the company. Other correspondents include Edison and George A. Maister. Included is correspondence regarding the financial health and administration of the company and relations with its British sales agents. Also included are letters delaying the payment of accounts, announcing board meetings, and arranging for the purchase of insurance and supplies. In addition, there is a series of letters prepared by Miller on Edison's behalf to investor Arthur I. Clymer of Ohio.

Executive Committee Minutes (1916-1918) [not selected]

These minutes cover the period September 1916-May 1918. Members of the ESBCo Executive Committee included Charles Edison, who served as chairman, and corporate vice presidents Robert A. Bachman, Stephen B. Mambert, John V. Miller, and H. G. Thompson, although membership and participation varied over time. Included in the minutes of the weekly committee meetings are discussions of corporate policy, product development, and sales structure, as well as routine matters of day-to-day operations and accountancy. The minutes reflect the frustrations of the Executive Committee with the businesses of Miller Reese Hutchinson and John F. Monnot—individuals with whom ESBCo had sales agreements. Also included are discussions of estimated retooling expenses, standard sales discounts, prices of supplies and by-products, minor details of plant organization, company letterhead, stock on hand, and insurance. In several cases, one committee member was delegated to consult with Edison regarding a proposed product or expenditure.

**Edison Storage Battery Company Records
Correspondence (1901-1910)**

This folder contains documents, primarily correspondence, relating to the business of ESBCo. Included are letters pertaining to the construction of the ESBCo works, corporate finance, real estate, chemical production, the supply and performance of "E" cells, and relations with manufacturers of electric vehicles. Correspondents include Edison, Walter S. Mallory, and William G. Bee of ESBCo; investors J. Wesley Allison, Arthur I. Clymer, and James Gaunt; and John Jacob Astor, Herman E. Dick, James Gayley, and Willis N. Stewart. Most of the outgoing letters are tissue copies of correspondence authored by Allan H. Whiting, sales manager of ESBCo. Some of the items deal with supplies available from the United States Steel Corp., the North American Rubber Co., the American Briquetting Machinery Co., and Edison's own New Jersey and Pennsylvania Concentrating Works. Other letters relate to the electric vehicles sold by the Pope, Baker, and Studebaker companies and to Edison's search for an inexpensive supply of cobalt ore. Also included is a 1903 paper entitled "The Edison Accumulator for Automobiles," delivered by W. Hibbert to the Institution of Electrical Engineers in London.

Less than 10 percent of the documents have been selected. The items not selected include routine exchanges regarding the supply of equipment and materials for ESBCo, the payment or deferral of accounts, individual employment decisions, and delays in production. Also not selected are letters of transmittal and acknowledgment and items that duplicate information in selected material.

ESB - Silver Lake

July 8th, 1901.

Mr. David Tuers,
288 Orange Road,
Montclair, N.J.

Dear Sir:-

Please enter our order for one well to be located at Silver Lake, N.J. You are to start work on this on or before July 15th and complete it on or before August 15th, 1901.

You are to furnish standard casing and all tools and appliances, completing the well without any expense to us, to a depth of 150 feet. If on reaching that depth there is a continuous flow of clear water at the rate of 20 gallons per minute, we will pay you \$1.50 per lineal foot. In case there is not a continuous flow of 20 gallons per minute at the depth of 150 feet, you agree to drill to whatever depth is necessary without additional expense to us, until a continuous flow of 20 gallons of clear water per minute is obtained.

The well is to be 6 inches at top and not less than 5-3/4 inches at bottom.

Yours very truly,

Accepted
David Tuers



Wm. Allen

7/11/01
O.S.

[ATTACHMENT]

Dand Jones

Montclair, N.J.

Wallery

complete before Aug 15th
start before 15th

Close contract for sinking
6" well into the 5 3/4" at bottom
a well at Silver Lake for

Storage Battery Co.

price is one dollar & fifty cents
per foot. Contractor furnishes

Casing well complete &
guarantees a continuous flow
of ^{clear} water at the rate of

20 gallons per minute at a
depth of 150 feet. If he

will drill deeper at his
own expense ^{with} water in
obtained Edison

payment

ESB- 9445



OFFICE AND WORKS OF EDISON STORAGE BATTERY CO.,
SPRINGFIELD, O.

JOHN J. HOPPES, Pres.
ROBERT J. JOHNSON, V. Pres.



A. B. SHAWMUT, Secy.
J. A. BAYARD, Treas.

MANUFACTURERS OF
HOPPES LIVE STEAM FEED-WATER PURIFIER
AND EXHAUST STEAM FEED-WATER HEATER.

W. H. P. FISHER, Representative.

Room 701 A. Girard Trust Bldg. Telephone 3-47-02.

PHILADELPHIA, PA. July 17, 1901.

Edison Storage Battery Co.,
Edison Laboratory,
Orange, N.J.

JUL 18 1901

Gentlemen:-

Order this when price is right
J. E. E.

Your esteemed favor under date of July 13th, asking price f.o.b. cars Silver Lake, N.J., on one Live Steam Feed-Water Purifier of 800 gallons capacity per hour, has been referred to this office with instructions to quote you price, time of delivery and best discount.

In the proposition which we enclose, we quote you on Purifier for ^{100%}~~200%~~ working steam pressure. Should you not intend to carry this amount of pressure we would furnish you, on the same guarantee, conditions and terms, a Purifier for a maximum working steam pressure of 150# for \$807.00.

We could ship the Purifier for ¹⁰⁰~~200~~# working pressure immediately on receipt of order; should you want the Purifier built for 200# pressure we would have to build same, and could not make shipment under 10 days.

We enclose blue print drawing giving dimensions of this Purifier. Any further information that you desire will be cheerfully furnished if you will write us, or the writer will call at your office and see you, if you so desire.

Awaiting your further commands, we remain,

Yours truly,

THE HOPPES MANUFACTURING CO.,

B. W. Fisher

Our address is now #618 Fidelity Mutual Life Bldg.

[ON BACK OF PRECEDING PAGE]

Your esteemed favor of the 17th received,
and replying to same we would state that
the proposition which you have sent us
is not what we want.

We will give every a steam pressure
of 100^{lb} which would materially reduce the
weight of the purifier and a corresponding
reduction in the price of same.

Kindly ^{to} reconsider your bid on the above
working pressure of 100^{lb}.

Yours very truly

E. P. O'Connell

E.S.B.

July 19, 1901.

Mr. Herter:-

Go ahead and take charge of the placing and arranging of the Silver Lake Chemical Works. Benson will see that the work is carried out as you plan it.

Order what is necessary through Mr. Mallory to carry out the plan as agreed upon between myself and J.W. Aylsworth; advance the work as fast as possible and get everything in position.

Push the furnace in the Barn for Refn, as he must make a lot of iron for the 20 cells of battery Rogers is making and has not got much time to do it. Any changes he wants, make them quickly.

Yours,

Edison

ESPC.

August 6, 1901.

Mr. Randolph:-

I have given Devonald instructions, hereafter not to pay the Glen Ridge pay roll until it has been approved by Mr. Benson. The recent mistake in rates on the Italians caused us a great deal of trouble and we want to avoid anything of this sort happening again.

Yours very truly,

Devonald
Please note
and be governed
accordingly *W. L. Barry*

**PACIFIC STATES
TELEPHONE & TELEGRAPH
COMPANY.**

*Office of Vice President & General Manager,
San Francisco.*

August 9th, 1901

Mr. Thomas A. Edison,
Orange, New Jersey.

Dear Sir:-

Would you kindly have 30 sets elements complete Edison storage battery and 30 cells for same shipped to the address of this company, San Francisco by rail as soon as you are ready for delivery.

These cells are to be of as large size as you supply not exceeding 300 ampere hours.

Kindly say when we may expect them.

Yours truly,

Long Glass
Vice President & Gen. Mgr.

*Ammed
won*

Mallory

*Write Glass we will ship
as soon as factory is ready
they he is the man to give
the first order - we will*

frank

9

Buffalo, Attica & Arcade Railroad Co.

Office of the President.

~~Buffalo, N.Y.~~
Arcade N.Y., October 18th, 1901.

Mr. Thomas A. Edison,
Orange, N.J.

Dear sir:-

Your favor of the 15th inst. at hand. Will you please enter my order for four hundred horse-power of your batteries, to be delivered after your works are in operation. March or April delivery will be sufficient for my purpose.

If you can name price and guarantee now, I would be glad to know them; if not, please do so as early as you can. I have some idea of this from my conversation with you.

Will you also kindly inform me on the following points:

1st. Is it to be expected that a charged battery of say one hundred horse-power will give up this amount of power until entirely exhausted, and will not under any circumstances give up a greater power for a shorter time? - It will give up power at a greater rate than its normal rate but at a greater loss.

2nd. How many hours can a hundred horse-power battery be expected to work to its full capacity, and if the average draft from it is only twenty-five horse-power, will it work a proportionally longer time?

3rd. Will it stand charged and unused without losing power? or 33 horse-power for 8 hours.

I assume that the trolley system can be attached to the same car with this battery, and when under a wire car can be operated entirely by the trolley. Yes

Very truly yours,

J. J. Sullivan
President.

The loss by standing charged in practice is very small

AS to New Equip. equipment

October 21, 1901.

Mr. Herter:-

Mr. Edison says that on any more concrete work for Silver Lake, to use up the old brick instead of buying trap rock wherever it is possible.

Winchell

(4901)

Battery.

- From lower
this plan
- (1) How about Vats? are all that are wanted been ordered. *Order*
 - (2) How about further and plans for erecting vats on.
 - (3) Pump for transferring liquids.
 - (4) Copper lined Vats.
 - (5) Iron kettles, how many wanted, have they been ordered. *X*
 - (6) Stone ware tubs, how many wanted and have they been ordered. *X*
 - (7) Steam Engine, (Bris) for furnishing power, *Engine* for some, switches, starting box, foundation plans for Engine, steam piping, exhaust pipe, water separator, pipe covering and Dabbling.
 - (8) Number and size motors wanted in plant both buildings.
 - (9) Electric Lights, wiring, switches, volt indicator for lighting.
 - (10) Pump for Artesian well. *Pump from Min.*
 - (11) Condenser for distilled water, tank, etc. *Order.*
 - (12) Rollers, boiler setting, stock feed pump, grate bars, stoking tools, wheel-barrow for coal.
 - (13) Filters, Cloth, filter stands, evaporating dishes.
 - (14) Furnaces, fire brick, grate bars.
 - (15) Dryers, steam piping, trays, pans for drying, fans, motors.
 - (16) Stirring paddles in tanks, motors, etc.
 - (17) Water closet for men.
 - (18) Gasometer and building separately.
 - (19) Hydrogen generating, purifying, etc. in above building.
 - (20) Steam heating of buildings.
 - (21) Vest room.
 - (22) Office.
 - (23) Iron furnaces and piping for hydrogen.
 - (24) Nickel oxide grinding.
 - (25) Nickel and Iron mixing with Graphite.
 - (26) Packing.

correct for pump.

Glen Ridge.

- (27) Water Closet.
- (28) Plumbing for water closet.
- (29) Remove the water closet in corner at top end pipe.
- (30) Get machine shop tools and countershaft O. K. and tools ready.
- (31) Punching all up, vices in position, drawers in.
- (32) Ladder to motor, starting box for saw.
- (33) Belting for machines.
- (34) Office furniture, get desks, etc. for furnishing from Edison.
- (35) Small tools where good from Edison.
-
- (40) Plan of bottom floor 3 story building, position of the hydraulic presses and other heavy machinery.
- (41) Elevator and Motor, starter, etc.
- (42) Gearing and Motor for rolls.
- (43) Hydrogen annealing furnaces.
- (44) Engine, boiler, water separator, piping (Covered), stocking tools, switch board, amper meters, volt meters.
- (45) Dispose of scrap iron.
- (46) Dispose of Wood.
- (47) Drainage system.
- (48) Fix up blacksmith shop.
- (49) Remove brass foundry.
- (5) Get drain back of long low building.
- (51) Arrange nickel plating plant.
- (52) Arrange machinery 2nd story.
- (53) Arrange machinery 3rd story.
- (54) Store good but unnecessary stuff in side buildings.
- (55) Fix up yard.
- (56) Point brick of buildings.

- (57) Paint where Iron discolours the water paint.
- (58) Hurry Benton on his return to complete machine for briquettes.
- (59) Have Benton design changes necessary to make Edison Briquetting machine into Nickel and Iron Briquetting Machine.
- (60) Benton and Rogers finish model of machine making small briquettes so can go ahead; build lot of them.
- (61) Benton design a roll mixing machine for mixing Nickel with Graphite; also Iron.
- (62) Decide about rolls for grinding Nickel before mixing with Graphite.
- (63) Decide about model press for making cups and order necessary presses 100 horse power daily.
- (64) Test model strip perforator and make what is required for 100 horse power daily 20 hour shift.
- (65) Rogers to decide about the cells, making machinery what is required, Edison will give various size of cells.

Betty S. Condy
Gaunt & Janvier
365 & 367 Canal Street
New York

Pears' Soap

New York, Feb. 18, 1902.

Mr. W. S. Mallory, Esq.,

Maddon Hall,

Atlantic City, N. J.

Dear Mr. Mallory:-

I am sorry to learn from my brother who returned late last night that you are not quite yourself again. I trust that the balmy air of Atlantic City will put you right.

I went out yesterday in all the storm to the laboratory with Mr. Bayly, who is the half owner of the gold mine in Arizona which Mr. Edison has been looking into. Bayly became very much interested in the battery and would like to take some of the bonds upon which you have an option.

My brother and I want you to feel easy in the matter of your subscription, and are disposed to do what will best meet with your wishes.

We will take the ten thousand outright and I will let my partner have one or two and Bayly three or four, Doctor and I taking the balance. Possibly if you could have the ten thousand subscription turned over to me, you could get an option from Edison for five thousand of his, the call holding good to you for a year. If however you could not do this, we will take the five thousand outright and give you the call on the balance of five thousand. It is our wish to take at least this worry off your shoulders. Write me in the matter as I wish to keep it open until I hear from you.

With kind remembrances to Mrs. Mallory, believe me

Faithfully yours,

J. Gaunt.

Feb. 26, 1902.

My dear Mr. Gaunt:-

Replying again to your letter of the 18th inst., I beg to state that I have taken the matter of Storage Battery bonds and stock up with Mr. Edison, and find that he prefers not to give me an option on \$5,000.00 additional, as he has let so much of his subscription go; (He has just let Mr. R. H. Thompson, of Brooklyn, have \$5,000.), also two other of his friends, so his original subscription of \$50,000, is out down about half.

Under the circumstances, therefore, I am very glad to accept your offer, which I understand to be as follows:

I am an original subscriber for \$10,000. of the bonds of the Edison Storage Battery Co., carrying with them a bonus of \$5,000. of the stock of said Company, according to conditions stated in agreement dated Orange, July 11, 1901, between "The Edison Storage Battery Company, a corporation organized under the laws of the State of New Jersey, party of the first part, and the several subscribers, whose names are hereunto annexed, parties of the second part, and Thomas A. Edison, party of the third part."

I understand that you, Dr. Gaunt and Mr. Bayley will assume my \$10,000. subscription and make payments already called of thirty percent, (three calls of 10% each) and will pay the call of 5% due on or before March 3, 1902 and such further calls as may be made by the Company, under the conditions of contract, and that you will give me a call or option good for one year, on five thousand

Mr. J. G. #2.

of the bonds, carrying ^{with them} twenty-five hundred dollars of stock at same price as that which you paid for the bonds.

I suppose it will be in order to have an agreement drawn; I will be glad to have it done, unless you prefer to do it.

I desire to express again to both Dr. Gaunt and yourself my great appreciation of your kindness in helping me in this matter and while I am very sorry to let go one half of my subscription, there is no one to whom I would rather assign it than to the Doctor and yourself, as I feel convinced, from present conditions of the battery, that the stock will be very valuable.

Sincerely yours,

To James Gaunt, Esq.,
365 Canal St.,
New York.

E. S. O. C.

HENRY H. THOMPSON,
PRESIDENT.

HENRY D. NORRIS,
VICE PRESIDENT.

EDWARD S. SHAFER,
TREASURER.

MARTIN H. DICK,
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MEDALS:
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INTERNATIONAL, UNIVERSITE D'EDUCATION, LONDON, 1888.
EXPOSITION UNIVERSELLE, PARIS, 1889.
WORLD'S COLUMBIAN EXPOSITION, CHICAGO, 1893.
EXPOSITION, BORDEAUX, 1895.

CABLE ADDRESS:
"CORTEXA, BROOKLYN."

BROOKLYN, N.Y. Feb. 26, 1902

S
W. S. Mallory, Esq.,
Edison Laboratory,
Orange, N. J.

Dear Mr. Mallory:-

As agreed yesterday, I beg to hand you herewith Check for \$1750.00, covering as I understand it, the three instalments of 10%, and the fourth of 5% due on or before March 3rd on the amount of the \$5000 Bonds of the Edison Storage Battery stock, which Mr. Edison has kindly allowed me to have.

With thanks to Mr. Edison and yourself for the favor, and awaiting due returns, I am,

Very truly yours,

[ON BACK OF PRECEDING PAGE]

Feb. 27th, 1902.

Robt. H. Thompson, Esq.,

Prince & Concord Sts.,

Brooklyn, N.Y.

Dear Mr. Thompson:-

I beg to acknowledge the receipt of yours of the 26th inst. enclosing check for \$1750. covering three instalments of 10% each, already paid and the fourth of 5% due on or before March 3rd, on amount of \$5,000. bonds of the Edison Storage Battery Company, which Mr. Edison has agreed to let you have out of his subscription.

I beg herewith to enclose an assignment from Mr. Edison covering the right. We will also arrange to have one of the bonds issued and forwarded to you as soon as it is countersigned, and hereafter as soon as all payments amount to more than an additional \$1,000., bonds will be forwarded to you.

Mr. Edison left this afternoon in very good health and spirits and has given us free hand both in the Cement and Storage Battery work. We hope within three or four weeks to send you an invitation to come to Orange and have a ride over one of the new

Yours, very truly,

(S.D.)

(S.D.)

(S.D.)

(S.D.)

(S.D.)

(S.D.)

(S.D.)

(S.D.)

(S.D.)

(S.D.)

(S.D.)

Gaunt & Janvier
365 & 367 Canal Street
New York

Pears' Soap

New York, Feb. 27, 1902.

W. S. Mallory, Esq.,

Orange, N. J.

Dear Mr. Mallory:-

I am in receipt of yours of Feb. 26th, the contents of which are entirely agreeable.

I shall be glad if you will have the agreement drawn and bring it in to me, making an appointment to lunch with me as soon as you can. I trust that this will be at an early date because I want you to meet a man who is about leaving for London, and I am desirous that you should see him before he goes.

Please let me know whether it will be agreeable for us to pay at once \$4,000 on account of this \$10,000 and have the four bonds delivered to us. This will anticipate the ^{interest of the} extra 5%, but it will put the matter into a more concrete shape. I presume that you can bring the four bonds in with you and at that time have us sign the agreement, and upon delivery of the \$4,000 get the bonds?

Kindly let me know your pleasure in the matter, and believe me

Faithfully yours,



8384 - Silver Lake

Callisthesus

"Edison's Notebook"

From the Laboratory
Thomas A. Edison

Orange, N. J. Aug. 21, 1902.

Thomas A. Edison, Esq.,
Stewartsville, N. J.

Dear Sir:

I beg to advise you that the mortgage on the Silver Lake property for \$11,175.00 falls due on Sept. 30th and is held by Mr. H. C. Hallenbeck, Mountclair, N. J. Do you wish me to find out if Mr. Hallenbeck will let the mortgage run.

Yours truly,

J. R. Randolph.

Write & get Mr. Hallenbeck
if he wants the mortgage
paid or extended.

United States Steel Corporation

71 BROADWAY EMPIRE BUILDING

VENUS PRESTON,
THIRD VICE PRESIDENT.

New York. 28th August 1902.

Dear Sir:

Herewith returning communication of Edison Storage Battery Company, dated the 5th instant, we beg to advise it is not probable that the special steels of very high tensile strength would answer the requirements of the Edison Company, as material of the character mentioned is so brittle as to practically forbid its formation into shapes such as are mentioned by the Edison people.

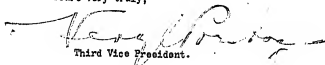
It is quite possible that nickel steel would supply the want of the E. S. B. Company, and, doubtless material of this character could be obtained in the sizes mentioned, although the quantity of an order would be of necessity sufficiently great to warrant making a heat of special steel. Steel of this sort would be very costly in its raw state, and the cost of working it into plates or strips would add very much to its price on account of the difficulties attendant upon working such material and the heavy manufacturing loss incident thereto, and, consequently any price named would be a mere guess. We suppose the price would be at least 10 cents per pound and probably more, even in the form of tubes, which would be easier to obtain than sheets or plates in material of the sort under consideration. We are inclined to believe that the lowest price it would be possible to name for nickel steel would be prohibitive.

United States Steel Corporation

-2-

If we can be of any further service in the matter, we shall
be pleased if you will so advise us.

Yours very truly,


Third Vice President.

Mr. James Gayley, First Vice President,
United States Steel Corporation,
71 Broadway, New York.

J. E. Halsey
W. H. H. The Authors Compliments
142
Institution of Electrical Engineers.

File
THE EDISON ACCUMULATOR FOR
AUTOMOBILES.

BY
W. HIBBERT, Associate Member.

Paper read November 26th, 1903.

Excerpt from the Journal of Proceedings of the Institution of Electrical
Engineers, 1903, Part 185, Vol. 33.

The Institution is not, as a body, responsible for the opinions
expressed by individual authors or speakers.

Excerpt from the Journal of Proceedings of the Institution of Electrical Engineers, 1904, Part 165, Vol. 53.

THE EDISON ACCUMULATOR FOR AUTOMOBILES.

BY

W. HIBBERT, Associate Member.*

The problem of making an accumulator with an alkaline electrolyte has been before the world for many years, and has been attacked by a fairly numerous body of workers. It is known that Mr. Edison is one of this number, and various public statements have appeared as to the results of his labour. Most of these can be neglected as void of authority, but the account published by Dr. Kennedy before the American Institute of Electrical Engineers was evidently based on carefully executed work. From this paper we learned the general nature of the cell, together with certain useful numerical data. 14 watt-hours were obtained from one pound weight of the cell, the average E.M.F. being about 1.25 volts.

It is not necessary to repeat here the other data from Dr. Kennedy's

* Read at Meeting of November 26th, 1903.

paper, as they will be brought up to date by the facts to be quoted from my own tests. It is sufficient to say that very little was done during the next year. The matter seemed to fall into the background, and public opinion settled down to a vague belief that the cell had not yet reached the commercial stage. Indeed, I have heard doubts expressed as to the very existence of the cell. To some extent, I shared this scepticism, not because I doubted the existence of the accumulator, but because of its constitution. I doubted (and expressed my doubts in print) whether the plates would be altogether free from local action, and whether a very small amount of this weakness would not be sufficient to destroy the plate. These fears were based on the data afforded by Dr. Kennedy's paper, more especially the thinness of the plates, and also the probable results of mixing graphite with the active material.

Such anticipations were, I suppose, quite legitimate as anticipations, but they have not been justified by the results of actual trial. It is one of the striking features of the cell, that it recommends itself by work more than can be done by any verbal account.

In the early part of this year, I obtained three of Mr. Edison's cells of small size, and in early June was provided with a Standard Automobile cell. Finally, during part of my summer vacation I was able to run about 600 miles on an automobile driven by 39 Edison cells. The general results of the work done on all these will be described in this paper. I shall confine myself to a somewhat simple statement of the facts verified by myself, feeling sure that those will be most acceptable to the members of the Institute. But it may be worth while mentioning that well-known men at Milan, Paris, etc., have obtained laboratory results which agree in all the main particulars with my own. They have not as yet had the opportunity of testing on the road. A brief description of the cell will be advantageous.

Standard Automobile Cell.—This contains 14 positive and 14 negative plates. Each plate is made of sheet-steel, nickel plated, punched with 24 holes of rectangular shape. In each of these holes is inserted a flat pouch or pocket containing the compressed active material. The walls of these pockets are perforated by exceedingly fine slots or holes, through which the liquid can penetrate. Thus the current can easily pass to and from the active material contained in the pockets.

Active materials.—Both positive and negative plates are alike, except in respect of the active material. The pockets on the positive plate contain nickel peroxide; those on the negative plate contain finely divided iron. Each of these active materials is, I understand, mixed with flake graphite.

Electrolyte.—The liquid is a 20 per cent. solution of potash.

Arrangement.—The plates are fixed very near each other. Yet there does not seem to be any danger of short-circuits. The plates are thin, it is true, but being made of steel, they are thick enough to give rigidity. As a further precaution, vulcanised rubber separators are put between the plates, making the whole a compact mass, whose stability is calculated to resist all the ordinary mechanical shocks it is likely to undergo.

External arrangements.—The cell is sealed in its steel case, the top

being fixed on by a special solder, not acted on by the potash. Two stout connecting-pins (from the positive and negative plates respectively) come through liquid-tight bushes of vulcanised rubber. These pins are made slightly conical, save also the connectors which fit on them, and the mechanical finish and easy grip of this terminal add to the value of the battery. The connector is further secured by a screw-nut and fastening-pin. The connector has a much higher conductivity than those of the ordinary type of accumulators.

On the top of the case there are also—

(a) A spring stopper with rubber flange, covering the hole by which the electrolyte is introduced, or distilled water added from time to time.

(b) A vent hole guarded by a gravity valve. This provides for the escape of the gas evolved during charge. The hole and valve are covered by a gauge nipple, which prevents escape of spray while allowing gas to pass. It also prevents any flame finding access to the interior of the cell through the stream of evolved gas.

The complete cell stands 13 inches high (overall) and measures 5½ x 5½ inches horizontally. It weighs 17½ pounds. A large part of the external steel case is corrugated to increase its rigidity.

An immediate consequence of examining these features of the cell, is to impress the observer with their admirable fitness—perfection is hardly too strong a word. That which is so lacking in ordinary accumulators—mechanical strength or design—is here in obvious and large measure. The general mechanical structure of the cell is well calculated to remove or to diminish any antecedent adverse opinion.

Electrical data.—The E.M.F. is 1.75, though as there is a very persistent gaseous polarization effect, the figure cannot be regarded as quite rigid. For a long time after charging it is much higher. The internal resistance is 0.003 ohm. The output at 60 amperes is 210 watt-hours, as 11.8 watt-hours per pound.

The diagram Fig. 1, on page 4, shows the arrangements used for charging and discharging.

It is the cell under test. 11½ pieces of trolley wire used for connections. M, M, M, mercury cups standing in a large tank full of oil.

R, a standard resistance as 0.0109 ohm, verified by the Board of Trade.

V and A, voltmeter and ammeter, both re-calibrated for these experiments.

Large lead accumulators were used for charging E. For the purpose of charging, constant resistance of varying value and diameter were used to bridge M, M. For discharging it was necessary to bridge M, M, as well. The control of either strong or weak currents was quite easy and rapid by putting constant wires in parallel across the mercury cups. In very few of the experiments did the current vary as much as 5 per cent. The average variation was probably about 0.3 or 0.4 per cent.

The curves in Fig. 2 tell their own story.

A striking feature of the curves is the relatively high value of the capacity at the higher discharge rates. The difference in amper-

hours at 30 and 60 amperes is almost negligible. Even at 120 amperes the capacity is 93 per cent. of the maximum, and at 200 amperes is still as high as 86 per cent.

These results at once indicate a valuable feature of the cell for many of the emergencies of engineering. That the quantity obtainable at the high rates should be such a large proportion of that possible at low rates is both surprising and agreeable.

Output.—In relation to the weight of the cell the work done is higher than usual. Taking the output at 210 watt-hours* and the weight at 17·8 lbs., the specific output amounts to 11·8 watt-hours per pound of cell. This must be regarded as a high figure. It is true that nearly equal figures have been obtained with other cells, but carelessly at considerable risk. The weight of lead cells is reduced by making

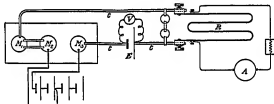
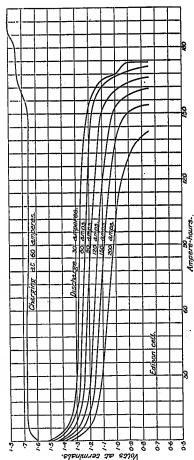


FIG. 1.

the supports very thin, but this shortens life. Output can be increased by using stronger sold, but this leads to rapid loss of charge if the cell stands idle. These serious risks do not accompany the method of getting high specific output in the case of the Edison cell. It is, as we shall see, able to retain a large proportion of its charge for a long time, and its relation to "life," although not yet fully verified by any work, is one of very considerable security as far as can be judged by the results already obtained. In relation to volume, the specific output is 1565 watt-hours per cubic foot.

Influence of Temperature on Output.—In the case of lead cells, this is very marked. With the Edison cell, no definite series of experiments has been made, but accidental circumstances afford evidence of some interest. Some discharges were taken on two of the few very hot days of last summer. The high temperature of the air, added to the heating effect of the currents, caused the temperature of the cell to rise very high. With a current of 120 amperes, it reached 56° C. The output rose to 103 ampere-hours, some 9 ampere-hours more than were obtained at a temperature of 33 degrees. This is an increase of 55 per cent. in capacity for a rise of 21 degrees, or an increase of 0·26 per cent. per 1 degree rise.

* This is at 60 amperes; at 30 amperes the output is somewhat higher.



Other experiments, not specially designed to test the point, indicated a detectable but small increase. The effect is, however, very much less than with the lead cell. With them, it may be a 2 or 3 per cent. per degree centigrade. With the Edison cell, a few degrees difference in temperature would produce hardly any change in the quantity output.

This difference in the effect of temperature doubtless arises from the difference in the nature of the action going on in the respective electrolytes. The continued working of the lead cell demands a continued supply of the acid at the internal working faces of the porous materials on the plates, and a rise of temperature helps to provide this by increasing the rate of diffusion of acid from the outside. In the Edison cell there appears to be practically no need for diffusion or circulation of the liquid. It is not an active material in the ordinary sense; it acts only as a conductor. Hence a higher temperature cannot change the action except by diminishing the internal resistance of the cell. Even here the action must be differential. For the liquid will diminish in resistance as the temperature goes up, while that of the plates themselves will increase. The first of these, however, being the greater, will determine the resultant change, with a consequent increase in chemical action before the pressure falls to a limiting value. For example, in the experiment described, which led to a final temperature of 54° C., the resistance of the electrolyte would be about 50 or 40 per cent. less than in the corresponding experiment at 33 degrees.

It is also of interest to note that these experiments at higher temperatures were the earliest. The other experiments described in this paper were all done subsequently, and therefore show that no injury had resulted from the heating due to higher external temperature and also to the excessive currents passing through the cell.

INTERNAL RESISTANCE.

It is not easy to determine this except at times when the pressure curve is tolerably flat. Attempts were made, however, to get an approximation by opening the circuit for a moment or two and noting the rise in volts at the terminals. The value—

$$\frac{E - V}{C}$$

comes out as a tolerably constant figure from the various curves in Fig. 2. It rises from 0.0013 ohm with the lower currents, to 0.0020 with the higher. The value does not vary appreciably over the greater part of the discharge. But towards the end, where the pressure begins to fall quickly, the resistance rises at a fairly rapid rate. At the end it may approach 0.004 or 0.005 ohm.

SHORT CIRCUIT.

With the object of testing the power of recovery, one of the small cells was partially discharged, and then short-circuited for forty-eight

hours. After a subsequent long charge it gave the discharge curve B, Fig. 3. Compared with the normal discharge curve A, B indicates a deficiency. It is evident that the cell has not yet recovered. On charging again, however, and taking a second discharge (curve C), the deficit hardly appears; the cell has practically recovered from the harsh treatment to which it had been subjected.

HIGH RATE OF CHARGING.

The foregoing experiments prove conclusively that the Edison cell can maintain a high rate of discharge. The interest of this question hangs on its maximum charging rate, and this I have not been able to touch. The following curves, Fig. 4, show the course of an experi-

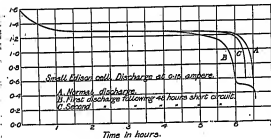


FIG. 3.

ment made to test this point. The cell was first carefully discharged at 30 amperes down to 0.75 volt. It was then charged for one hour, 177 ampere-hours being put in. The current was not quite steady, varying from 180 to 170 amperes over most of the time. Near the close of the hour it fell to 160 amperes. The subsequent discharge shows that 124 ampere-hours were delivered, which equals 70 per cent. of the charge.

Further experiments on this point appear in the later section dealing with the motor-car work, proving that the cell can be charged at over 200 amperes.

FLEXIBILITY OF THE CELL.

The new cell will probably be called upon to stand very rapid and large fluctuations in the value of the current. The following curve, Fig. 5, shows that it behaves like an elastic structure, its pressure rising and falling with varying demand, but responding at such a rapid rate that the lines of changing pressure appear vertical on the diagram.

The change to and from 250 amperes will appear more trying if the weight of the cell be kept in view.

CONTINUED DISCHARGE AT LOWER VOLTAGE.

In most of the experiments so far described, the discharge was stopped when the terminal voltage fell to 0.75. At this point, as all the curves show, the pressure is falling rapidly, and would lead to the assumption that it must speedily reach zero. But this is not the case. At a still lower pressure the rate of fall suddenly alters, and the curve becomes far flatter. Presumably this is due to a secondary chemical action arising when the active materials have been more or less changed by the ordinary discharge. The curves given in Figure 6 indicate the extent and variation of this prolonged discharge. They were given

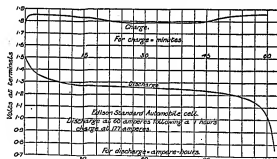


FIG. 4.

by one of the small cells containing four pockets, two positive and two negative. The currents are small, but the indications are typical of the behaviour of larger cells.

EFFECT OF REST.

There are many experiments in my notebook which show that the cell does not suffer when allowed to stand discharged for fair lengths of time. A very good illustration will be given when dealing with the motor-car trials. A parallel question arises as to how far the cell can retain its charge when allowed to stand idle.

Various trials have been made, two of which may be mentioned. A cell was charged fully and allowed to stand 48 hours before discharge began. It then yielded 125 ampere-hours = 91 per cent. of the full discharge.

Part of this deficiency is undoubtedly due to the fact that a discharge

commencing immediately is enriched by the gases contained in the pockets along with the active material. The experiment just alluded to was therefore regarded as giving an idea of the immediate value of this

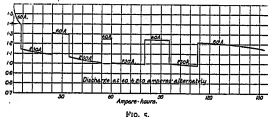


FIG. 5.

gas effect, along with the 48 hours' action due to a short rest, such as the experiment was intended to detect. To get a better estimate of the effect of rest on the active materials, the cell was now charged up again

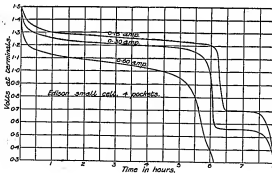


FIG. 6.

and allowed to rest for 26 days. The discharge which followed gave 124 ampere-hours.

Compared with the full discharge, 170 ampere-hours, this is equal to 73 per cent. But compared with the discharge taken after two days' rest, we have an efficiency of 80 per cent. after 24 days' rest. That is to say, the active material lost only 20 per cent. of its charge in 24 days.

The reference here made to the effect of rest on a charged cell makes this a convenient place to say how persistent is the effect of the electrolytic gases on the E.M.F. When charging is complete the E.M.F. is about 1.5 volts, and if the cell be left on open circuit the value falls very slowly to about 1.35. It may be interesting to give a curve showing the time change in the E.M.F. when the charged cell is allowed to stand.

EFFICIENCY.

Efficiency is not very much considered in the present methods of working traction cells. A laboratory experiment is of much less use on this point than on many others. The strength of acid employed enjoin on the user the advisability of charging up within the car comes in, and of giving the cells a "back-up" charge if much time elapses before the car is used again. This reduces efficiency. Tested on the bench, the Edison automobile cell has an efficiency varying from 66 to 90 per cent. Charged and discharged at 60 amperes, I found it to be just about 60 per cent. Charged at 100 amperes and discharged at 60, the efficiency was 56 per cent. Charged for one hour at 177 amperes

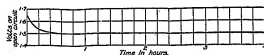


FIG. 7.

rate, and discharged at 60 amperes, the efficiency was 50 per cent. The highest figure (about 66 per cent.) was obtained at 30 amperes.

These figures are lower than would be found with good lead traction cells under the same condition of discharge following immediately after charge. But the experiment described on page 217, in which a cell was kept charged for nearly four weeks, proves that under garage conditions the Edison cell would have a much higher efficiency than the cells now used.

The point is of secondary importance only, as the total cost of keeping a car in running order is so high in relation to the cost of energy, that variations in the latter are of small moment.

OBSERVATIONS ON THE ROAD.

In considering the conclusions which could legitimately be drawn from the foregoing laboratory experiments, it was obvious that the results might be objected to on the ground that an accumulator intended for automobiles ought to do its work on the road, subject to all the irregular vibration which travelling entails. The force of this objection is obvious, and I was anxious to get some chance of watching the battery under running conditions. Fortunately, some 40 cells

arrived from America in July last, and Mr. Dick had 38 of those placed on a runabout, and gave me the chance of observing their behaviour. To this opportunity I could devote only a part of my summer holiday, and therefore the observations do not cover such a long run as is desirable. But they were long enough and varied enough to show that the laboratory results are still obtained when the work is done on the road.

A brief description of the car will suffice. It was a runabout made by the Studebaker Company of Indiana, weighing, when fully loaded and carrying two persons, about 2,020 lbs. Of this, 200 lbs. was due to the 38 cells and their wooden frames.

Unfortunately, the battery and motor were unsharply mated, the latter being a Washington 40-volt 24-ampere machine, while the cells gave an average pressure of about 48 volts. The motor was therefore overloaded all the time, and if it had been a point of importance to investigate the motor and car as well as the battery, some changes would have been necessary. But as the battery could, by careful observation, be tested independently, and as time was not too plentiful, the car was accepted as it stood.

It is not necessary here to describe any of the mechanical details. The controller had four steps with four speeds, but the first and second were hardly ever used except momentarily.

It remains now to state the results of the tests. The form in which this is done is of some importance, because it ought to deal with the battery side of the investigation; traction questions proper are subsidiary. A brief statement will clear them out of the way.

Traction Effort.—On good level road the speed was close to 24 miles per hour, and the power about 1,200 watts, which is practically equal to 2,200 watts per ton. These figures indicate about 79 lbs. per ton for the tractive effort. Allowing for the motor efficiency, and putting it at 85 per cent. (probably not so good because of overloading), the tractive effort is 67 lbs. per ton.

The work appears to be about 135 watt-hours per ton-mile, a higher figure than is usually taken in America. This is not astonishing, considering the want of balance between battery and motor.

Cost of Power.—Fourteen miles meant nearly two R.O.T. units. If we take the efficiency of the cells as low as 50 per cent. (it is always low in electric traction as usually carried out), the charging would be 4 units. At 2d. per cent the cost would be 8d., or 0.52d. per mile.

Turning to the battery. The programme I drew up was intended to yield answers to the following questions:—

1. Is the capacity of the cell the same when running on the road as when discharging in the laboratory?
2. Will the battery stand excessive discharge rates on the road?
3. Will it take a rapid charge and utilize it on the road?
4. Will it recover after lying discharged for some time?
5. Does the capacity change in any detectable degree by reason of the mechanical agitation?
6. What attention is required?

When the car was landed over to me it had already been driven by the battery a distance of about 400 miles. This work was done in Paris, the charging being arranged by M. Gado. This part of the work, however, I do not describe, the purpose being to exclude all but my own work.

The following is a diary of our runs:—

- Aug. 29. Standing discharge: 150 amper-hours.
 Aug. 30. Paris to Versailles and back, through the Park of St. Cloud. Good climb. Run about Paris ... 39 miles.
 " 31. Eighteen miles towards Rouen and back. About Paris ... 48
 Sept. 1. Journey to London. Car ran across Paris, then train to Havre; train also from Southampton to Waterloo. Motor overhauled at Niagara Garage, and then finished the discharge by running round London. At Southampton the battery had to be partially discharged through wire ... 294
 " 5. London to Northampton, stopping at Dunstable for a partial charge. Part of the discharge was taken next day round Northampton 77
 " 7. Northampton to Leicester. One stiff climb at Hopping Hill ... 32
 " 8. Partial charge at 100 A. for 90 minutes = 150 A.H. Leicester out towards Nottingham 16 miles and back; through Loughborough ... 38
 " 9. Charge 225 A.H. Repeated yesterday's run with extension. Discharge 150 A.H. ... 77
 " 9. Charge 1 hr. 55 min. 210 A.H. Repeated the Loughborough run ... 77
 " 10. Last six miles run out next morning. One hour's charge, 150 A.H. Same run. Discharge, 107 A.H. (52 miles) ... 65
 " 10. Charge 1 hr. 20 min. = 245 A.H., and started off for Northampton. Storm all the way. Wind dead ahead. Most excessive discharge ... 65
 " 11. Northampton to London, with partial charge at Dunstable. Run about in London ... 71
 " 12. Allowed to stand discharged for ten days.
 " 20. Charged for 1 hr. 30 A.H. Run round London 31
 " 29. Standing discharge: 158 amper-hours.

The total distance run is 908 miles under my control. Adding the 400 miles run before that time gives 908 miles.

It will be observed that several runs were made from Leicester. This was due to the fact that Mr. Hales, the engineer to Mr. Watkes, was kind enough to arrange that he would be ready to assist in charging just as I liked, and at any hour. Mr. Hales also chose for me the route

followed, my request being that it should be a fairly typical English road. The conditions of each run were decided not by the desire to make so many miles, but to solve one of the six questions already mentioned.

1. Is the capacity on the road equal to that found in the laboratory? In order to answer this and some other questions, I determined to eliminate the influence of car and motor, and to record observations of voltmeter and ammeter while discharging, just as is done in the laboratory. It seemed to me that the trouble involved (travelling with watch and notebook in hand) was worth facing, and it certainly taught me a great deal which could not have been definitely known in any other way.

As will be seen in the section 5, a preliminary experiment proved that the battery had a capacity of 150 amper-hours at 60 amperes.* The question was, would the same quantity be available on the road? From the many observations, I choose the record of September 3 as one of those most closely watched. The run was from Leicester to some miles beyond Loughborough and back, with a final run round Hridgegate Park Road. Distance = 40 miles. Eighty observations of current during the 24 hours make the amper-hours 150.

As the discharge was not then quite complete—the volts being above 0.75 per cell—it is evident that the quantity delivered in one complete discharge was practically the same as that found in the laboratory.

2. Will the battery stand excessive discharge rates on the road? The original intention was to allow this to be determined by choosing stiff gradients for the car to negotiate. Accidentally however, and most unpleasantly, we had a better test than that. The return journey from Leicester to Northampton was commenced in the afternoon of September 10th, the day of the great cyclonic disturbance which spread over England and the West of Europe. That 32-mile run will not easily be forgotten. My ordinary observations were impossible; recording was a failure. But I mentally noted that the current on the level rose to 55 or 60 amperes instead of 40, the wind being dead ahead and roads greasy. On the slopes the current was frequently 90 and 100, and on one hill the index passed out of my sight, and must therefore have been momentarily more than 150 amperes.

The journey took 4 hours, as compared with 2½ hours on our outward course. The last 6 or 7 miles were covered at a slow pace, and an interesting point crops up in that connection. Although I could not make a written note of the instrumental readings, I kept a pretty constant eye on the ammeter. While these data were fresh in my mind I calculated the discharge from the cells, and made it close to 190 amper-hours. I regard this as a figure which errs on the side of deficiency rather than excess. If it be asked how this excessive

* This is somewhat lower than I found in the laboratory. Detailed examination of the thirty-eight cells proved that two cells were of decidedly low capacity—probably from the beginning. This would account for the deficit.

quantity could be obtained, the answer must be found in that extra delivery at lower voltage, which is shown in Fig. 6.

For many purposes this low-pressure discharge is useless, but for an emergency like that of this stormy afternoon it is a great consolation! It helps to carry the car home, although not counted in the normal capacity of the cell. It is noteworthy that the cells deliver the normal current with this lower voltage for quite an appreciable time.

3. Will the battery take a rapid charge (say one hour) and utilise it in discharge?

Several experiments of this sort have been recorded. A one-hour's charge was tried at Leicester. Unfortunately the supply station belonging to Mr. Watbes was in a state of transition, but his chief engineer, Mr. Hales, took considerable trouble in giving us special facility: 120 amperes was the maximum current we could get at the time, owing to the unfinished state of the new building and machinery.

The cells received 120 ampere-hours in the hour, and in the subsequent run delivered 107 ampere-hours = 77 per cent. of the charge. This is exactly the figure found in the laboratory test (page 7), and also in the standing discharge test described in (4) and (5). From these three experiments it is clear that with currents of 200, 175, and 120 amperes continued for 1 hour each, the cell absorbs about 70 per cent. of the charge. I have not had facility for trying a still higher current, but it seems probable that the same proportion would hold good even with a higher current.

In Leicester, as in London, the run obtained from a one-hour's charge was quite satisfactory.

4. Will the battery recover after standing discharged?

The car was run about until its speed, and also the voltmeter, indicated that we were on the final slope of the discharge curves. The car was then allowed to stand ten days in the discharged condition. At the end of that time it was charged as follows:—

For 45 minutes at about 200 amperes =	156 ampere-hours.
For 15 " " " " " " " " " "	120 " " " " " " " " "
Total = 1 hour's charge =	186 " " " " " " " " "

The car was then run round London and covered 31 miles, yielding 134 ampere-hours. This figure for the discharge was found by numerous observations taken during greater part of the run, combined with less numerous readings for the rest of the time. The efficiency is $\frac{134}{186} = 72$ per cent.

From these data, it is obvious that the behaviour of the 38 cells after ten days' inactivity in a discharged condition is very similar to that observed in the laboratory when quite new, and also very similar to that observed at Leicester under high charging rate.

It was thought that the combination of harsh treatment due to standing discharged followed by excessive charging current would prove speedily trying, but the cells behaved very well even under these circumstances.

The test now recorded was followed by the final test on capacity as

recorded under (5), the two tests taken together giving a decidedly affirmative answer to the question now under discussion.

As the question respecting the wisdom of leaving a discharged cell idle is one of great importance, I will make one other remark. No injury appears to arise: the cell works as well after as before. But it is advisable to charge for a longer time after such an idle time. The chemical actions—the absorption changes—are a little slower than usual. Or perhaps it is more accurate to say that a greater proportion of active material is in need of restoration by the charge.

5. Does the capacity change in any detectable degree by reason of the mechanical agitations due to running?

Accumulators used for automobiles always deteriorate in capacity after a longer or shorter time. Roughly speaking, even a good battery of the lead type shows a diminished capacity after about 600 miles run, even by the crude test of miles per charge. Such a test must always be crude, because of the influence of the road, wind and gradient on the distance covered, even while the battery is still fresh.

As other duties prevented my taking charge of the car for more than 10 days, with no possibility of running anything like 1,000 miles, it was necessary to arrange for an accurate test of capacity, at the beginning and end of the trials.

A standing discharge was therefore taken at Paris on August 29th, and gave 129 ampere-hours. This is slightly less than that found for a single cell in the Polytechnic laboratory, but on examining each cell two were found to be decidedly low, and these two brought down the pressure to the final limit rather prematurely. However, as this figure was so set purely as a standard of comparison for a similar test, it was accepted, with all the disadvantage of two somewhat inferior cells.

On September 29th, after running 500 miles, the final standing discharge was taken, and gave 151 ampere-hours.

In these experiments the errors of observation may exceed 1, but do not rise to 2 per cent.

The result may be regarded as showing that the capacity remained intact during the 500-mile run.

Remembering that there were two cells in the 38 which were obviously low, probably from the beginning, it is doing no violence to accept the capacity as normal at the end of my trials, and therefore at the end of something like 500 miles run since they were put on the car. Fig. 4 gives the discharge curve. The observations at Paris and at London are indistinguishable on the scale to which this curve is drawn.

ATTENTION REQUIRED.

To practical men this is a most important point. They have not generally done justice to accumulators, because they have been unwilling to give them that unending examination which is devoted to the other parts of their mechanism. If the Edison cells needed more attention than that now given to lead cells, the need would be an objectionable feature to the men who have most to do with them. It was for this reason that I was so anxious to add to my laboratory work a series of trials from the garage point of view.

For example, the laboratory could never decide one most simple question. The terminals and connections of the new cell cannot be "burned" in any way comparable with the method adopted for lead cells. Would the more surface contact and screw-nut adopted by Mr. Edison make a lasting connection? Laboratory trials were useless for answering this question, even though it was obvious that the design of the terminal was exceedingly good from the mechanical standpoint.

However, my 500 miles on the road were sufficient to test them; not one of them failed or became weak. Not one of the terminals proper had to be touched from the beginning to the end of the run. We had rough roads and rough weather, so that the motor was seriously overloaded, and the car was so strained that it had to go into costly overhauls, and the car was so strained that it had to go into serious repair as soon as our run was finished, but the battery and the terminals endured it all. I was especially pleased to see that in the constant charge but one, with a charging current of 200 amperes, the contacts were still so good that not one of them became unduly warm.

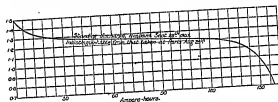


FIG. 8.

Considering what they had gone through, this was a very good testimony.

Another point about which I had some misgiving, and one that had been mentioned in the American papers, was the question of frothing. It was said that in charging, the evolved gases caused so much frothing that the liquid would soon be run out at the vent hole.

During my laboratory experiments, extending over two months' continuous work, frothing occurred on two separate occasions. But on each occasion it lasted for about one minute only. In both cases it occurred at the end of a long charge.

On the road frothing occurred with one or two cells on two occasions. Even these did not persist, and their evidence was rather in favour of the result being accidental. It is true that on the Continent I came across a cell which was said to froth rather persistently. But this probably arose from a very simple fact. A workman is very apt to trust the one kind of accumulator as he would the other. I found one of them even using only waste to polish the cap which covers the vent hole. It is obvious, however, that many kinds of grease will be objectionable, seeing that with the alkali they readily form soap solution,

with a consequent tendency to froth. Soap, grease, and all other colloidal ought, of course, to be excluded, and are excluded rigorously from the cell.

As the thirty-eight cells on the car were practically free from any signs of frothing worth mentioning, although they were put together by men who had never seen the cell before, and as this agrees with my own experience in the laboratory, I think that the objection made on this ground cannot be substantiated.

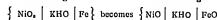
The point which requires attention, and which cannot be neglected with impunity, is the necessity for adding distilled water from time to time. As far as my own experience went, this was needed after about five or six chargings. This meant after each 100 to 170 miles run with our car. The frequency of the water addition cannot, however, have any settled relation to miles run. It depends on the number of times the cells are charged, and especially if overcharged. As different cars equipped with variable relative weight of battery run different distances on one charge, it is desirable to get this matter put into the right form at once. The men working at garage charging stations are apt to interpret everything in miles.

LIFE.

Respecting life, there is the general favourable tendency of the evidence already adduced. The cells used in the car had not changed by a detectable percentage of their original capacity at the end of my contact with them. This is the most direct testimony I can offer at present. Chemical examination is proceeding, but has not as yet reached a stage at which I can add to the present knowledge. The chemical changes may be summed up in the following equation—

After charge

After discharge

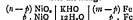


But it is better to write the equation in a manner which, though less simple, will be more in accordance with the practical requirements. Thus—

After charge



After discharge



If I am asked my opinion as to the probability of life, the reply is definite enough. Having had these cells under close observation now for some months, I believe they will live in working order for much longer time than is usual. How much longer I cannot say, but I look forward with some confidence to such a duration as will make the Edison cell a permanent and valuable addition to the resources of electrical engineers.

The Oceanic Press,
TOWN BROTHERS, LIMITED,
WORKING AND LONDON.

THOMAS A. EDISON,
PRESIDENT.

W. S. MALLORY,
VICE-PRESIDENT.

J. F. RANDOLPH,
SECRETARY-TREASURER.

EDISON STORAGE BATTERY CO.,

GENERAL OFFICE:
EDISON LABORATORY,
ORANGE, N. J.

TELEPHONE, "BII ORANGE"

WORKS:
GLEN RIDGE, N. J.
SILVER LAKE, N. J.
REYNOLD JANNNEY, MANAGER
TELEPHONE, "76 BLOOMFIELD."

GLEN RIDGE, N. J., February 19, 1904

Mr. W. S. Mallory, Vice President,

Edison Storage Battery Co.,

Orange, N. J.

Dear Sir:

In making out the inventory for January 1, 1904, we have aimed to follow the plans of the inventory of 1903. Indeed, we have taken the old inventory and wherever the same items were found, we have made no changes, allowing the figures to remain the same, as well as the name of the item, except in a few cases where some item had not been properly described or named.

Wherever machines or items have been transferred to another section of the building, we have made a corresponding transfer in the inventory. All new items have been arranged in their proper places in each section of the building.

I wish to call attention, however, to the fact that many of the machines inventoried are obsolete and really should be charged off to profit and loss. Many of the figures on the machines still in use should be changed to allow for depreciation.

I cannot say that the inventory as it stands represents anything like the true value of the Company's property. Of course, the money that has been put in obsolete experimental machines stands as an investment of the Company, purely as experimental work but has no tangible asset value.

W. S. M.

#2

Feb. 19, 1904

The chief cause of delay in getting out the inventory has been due to the fact that tools and machines and indeed all additions to the factory made during the past year on shop orders, had not been figured up until I came with the Company, which has made it necessary for the timekeeper, (who was the only one familiar with the records on this subject,) to go back to the beginning of last year and figure up all the orders, in order that he might have something like the true value to give to the tools. At one time it was thought advisable to employ someone to do his other work to enable him to give his whole time to the inventory, but I did not care to break in a new man (for whom we would have no use after the inventory was finished).

If my ideas are carried out for this year, the inventory will be complete at the end of the year, indeed, it will be complete at any time during the year with the exception of the floating stock which may be going through the factory and the only thing necessary to obtain a complete inventory of that any time desired will be to copy the stock room record. I purpose keeping before us a copy of the present inventory and whenever an order is issued affecting any item of that inventory, or a transfer is made of any machine, a record of the same will be made on the inventory so that the record will be kept up to date all the time, and we will have nothing to do on next year's inventory but to make a fresh copy of the record, unless indeed it be desirable to verify the lists. I think it not only practicable but very desirable to keep up inventories in this way.

Very truly yours,

Raymond Garrison
Manager

RJ/L

P.S. I have made no footings thinking you may want to change the figures.

45, Lansdowne Road,
Clapham, London, S.W.
May 16-1904.

Dear Mr. Edison:-

I beg
leave to introduce
herewith Dr. Oscar
Schmidt, Director of
the Oerlikon Works
at Zurich. As Mr.
Dick may have in-
formed you, he is
considering some busi-
ness matters with
Dr. Schmidt, who is
a well known expert
in all matters con=

nected with storage
batteries.

I trust you will give
him a favorable re-
port of your new
battery in its present
form, and greatly
oblige,

Yours Sincerely,
W. C. Stewart.

Thos. A. Edison, Esq.,
Orange, N. J.

GENERAL ELECTRIC COMPANY

PRINCIPAL OFFICE
SCHENECTADY, N. Y.

NEW YORK OFFICE, 44 BROAD ST.

May 27, 1904

Mr. Thomas A. Edison,
Orange, N. J.

Dear Mr. Edison:

I have arranged with Mr. Churchward to get me up an automobile the duplicate of his, and he tells me that it would be well for me to get my word in for the necessary battery, as the rest of the apparatus will be easy to get promptly. You will have the gratitude of Mrs. Hughes if you will set the battery part of the vehicle in motion, as she wants to get the air this summer.

Very truly yours,

Wm. D. Hughes

CTH/M

*Mr. Edison
Has seen this and told
me to give it to Mr. Mallory
at Standard Oil*

*What time he leaves
we will be glad to either get it
for delivery + ask Lincoln
for details*

"TOLEDO" GASOLINE.

"TOLEDO" STEAM.

POPE MOTOR CAR COMPANY



INDIANAPOLIS FACTORY.



SOLE AGENTS FOR THE
WAVERLEY INDIANAPOLIS.
UNDER U.S. & C. 4th EDITION USED.
No. 10000 1-1-1904



TOLEDO FACTORY.

Indianapolis, Ind. June 1, 1904

Edison Storage Battery Co.,

Orange, N. J.

Dear Sirs:

On account of your slowness in making delivery of Edison Batteries quite a number of sales for cars to be fitted with these have been cancelled, and owing to this fact we would kindly ask that you discontinue shipping the balance due on our order originally calling for twelve sets. We exceedingly regret that we are compelled to make such a statement, but it may be ere the end of the present season and perhaps within a short time we will have occasion to call on you for some of these to take care of our orders; and, of course, if such is the case, we hope that you will be in a position to take care of our requirements promptly.

Yours truly,

Pope Motor Car Company,

WAVERLEY DEPARTMENT

Mark R. Brown
Purchasing Department.

MOO'C--MH.

June 2- 1904.

The rear axle would also need to be changed, as the location of the sprocket thereon would have to be different.

(2) Edison Storage Battery Co.

The efficiency of this new motor is approximately 80%
at normal load without the reduction gears.

Yours very truly,

N.Mc.

STUDEBAKER AUTOMOBILE COMPANY.

W. H. Grodin

6/3

Mr. C. J. [unclear]
 all I can find on the truck
 & 110 Bal. per [unclear]
 Order & 1150. Heavy Bros. 1. [unclear]
 per B.P. 10-13. Cost 58¢
 for H. & C. Parry-f

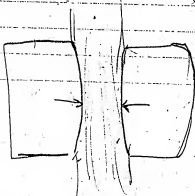
Done from [unclear] to [unclear]
 Order & 725. to B.P. 13-1.

Hope this will be
 what you want.

2- Tanks as shown on C-30- }
 12- 110 Bal. ~~Brocks~~ } 6-4-04
 24.
 (Shells)

[ON BACK OF PRECEDING PAGE]

Mr. Aybassov



One. Copper work tank, 11 ft dia. x 4 ft deep.
Sides #18 gauge (10.49") bottom #16 gauge (.065")
Copper. Double row of copper rivets along joint &
after riveting, treated in with cadmium
solder (manufactured by us) using zinc
chloride flux in soldering.

Three copper work barrels with open flange
top & fabricated false bottoms.
Sides to be #18 (10.49") also top & bottom
false bottoms to be #18 gauge (.134")
All flange joints riveted with double row
of copper rivets & treated with cadmium
solder using zinc chloride as flux.

One. Mitchell dissolving tank 13'-11 3/4" long
by 4'-6" wide x 2'4" deep.
Sides of #13 gauge (10.95") hard copper &
bottom of #12 g. (.109") hard rolled copper.
Fit with heating coil of 1 1/2" copper pipe
joined by R. & L. coupling, two connections
upper & lower & placed close to inside walls of tank

[ATTACHMENT]

- 1- S.S. has material. & will secure tank, & have it lined w/ N.R.C.
- 2- Mailed beer prints for bids,
- 3- Mailed " " " "
- 4- S.S. has ordered material and will make
- 5- Silver Lake will attend to.
- 6- Silver Lake, has one, will ask for bids on one.
- 7- Silver Lake has tank.
- 8- Silver Lake, will attend to.
- 9- Silver Lake will attend to.
- 10- Will ask for bids.



Edison Storage Battery Co.,
Orange, N.J.

Gentlemen:

Replying to yours of 5/5/AHW/L I wrote you asking you to select for me motor and controller, with other necessities, suitable to supplement ten of your cells, and furnish power to run my invalid's chair. I received no answer to my request. Will you not do this for me. As you know by our correspondence, I attempted to assemble necessary supplements to ten cells, and if my order had not been a conditional one, I would not have a useless motor. I don't know what to order. Will you not tell me exactly what to order, and where to order it? I desire to use ten of your cells you recommend, if I can get suitable supplements. It seems to me that, as a matter of business, you might make me out a list of each article needed to supplement your cells, telling me exactly what to order and where I can get it, with prices. I can then send you money for cells, motor with controller, and all needed accessories.

I understand that they are using electrically propelled chairs at the World's Fair. If your new light battery is used on them, perhaps one of them might do, and I can buy a complete wheel of the factory that manufactures wheels used at St. Louis. Perhaps, if your new light battery is not used on them, the factory might substitute you new light battery for one used on wheels used at St. Louis.

Please assist me in arranging a wheel which will lessen the troubles, and add a few joys to the life of a cripple who is dependant upon a wheel.

Yours,
O.W. FAYLOR

Where and by whom were electrically propelled chairs in use on World's Fair ground made?

GENERAL ELECTRIC COMPANY

PERSONAL OFFICE
SCHENECTADY, N. Y.

NEW YORK OFFICE, 44 BROAD STREET

June 8th, 1904

A. E. Whiting, Esq.,

Edison Storage Battery Company,
Orange, N. J.

Dear Sir:-

I beg to acknowledge yours of the 3rd inst. regarding a set of automobile motor curves and would advise that I expect to be able to get this set together within a few days and will take pleasure in mailing it to you.

I will take this opportunity to call your attention to the delivery wagons that the United States Express Company have on order with the Champion Wagon Company of Orange, N. J., which are to be equipped with either 60 or 64 cells of Edison batteries. I have been in touch with Mr. T. D. Gore, Manager of the Champion Wagon Company, and have recommended very strongly to him that for commercial reasons it would be to his advantage to use 64 rather than 60 cells. He has just written me that he is going to take the matter up with you either in New York or Orange on Friday or Saturday of this week. Specifications of these vehicles call for a capacity of 2500 pounds, but they are also to have a maximum capacity of 3500 pounds, which as far as he knows may be carried indefinitely. Consequently in our recommendation, we have advised the use of two 80 volt, 24 ampere motors, which from our data we believe to be none too much. He states that the

FILED 2

GENERAL ELECTRIC COMPANY.

A. E. McLaughlin

Mr. McLaughlin has been recommended by Mr. McLaughlin, and to
get an improved edition, he stated that he was going to make
this part of my work for you also.

Yours very truly,

W. H. H.

General Electric Company. *W. H. H.*
S. D.

HENRY M. LEWIS
PRESIDENT.

WILLIAM H. GILBERT,
SEN. MANAGER.

CONSTANT E. JONES,
SECRETARY.

GEORGE A. ROBINSON,
TREASURER.

The S. S. White Dental Manufacturing Co.

FOUNDED BY S. S. WHITE IN 1844 - INCORPORATED IN 1881

BRANCHES

NEW YORK, CHICAGO,
BOSTON, BROOKLYN,
ATLANTA, ROCHESTER,
BERLIN, BUENOS AIRES,
ST. PETERSBURG, TORONTO,
CABLE ADDRESS NEW YORK HOUSE
"WHITE DENT"

MAIN OFFICE
CHIEF STREET AND TWELFTH STS.
PHILADELPHIA
PUBLISHED BY THE COMPANY
Telephone 2070
TELEPHONE 1717 N. ST.

Singer Building
5, 7 and 9 Union Square West

New York June 9th, 1904.

Edison Storage Battery Co.,

Orange, N. Y.

Gentlemen:-

We were advised by Dr. E. R. Varcoe of Cochen, N. Y., to whom you shipped a 4 Cell E. 18 complete Storage Battery outfit, that he experienced some anxiety regarding its performance owing to the fact that it was so noisy that he thought it had gone wrong. Kindly send us copy of the letter you sent him in reply to his inquiry so that we may be kept informed as to what caused his experience, in order to answer any inquiries that we may have from future customers, regarding the peculiarities of the Edison Battery.

Yours truly,

THE S. S. WHITE DENTAL MFG. CO.,

per *M. J. Jones*

6/10/64/AHW/C.

Mr. E. W. Muzzy,

General Electric Co.,

44 Broad St., N. Y. City.

Dear Sir:

Replying to yours of the 8th inst., we beg to state that the writer wishes to thank you for forwarding the curves as promised.

In regard to the delivery wagons for the U. S. Express Co., would state that the writer called on Mr. Snyder yesterday, and impressed upon him very strongly the advisability of using 64 cells in place of 60. Mr. Snyder stated, however, that they were installing their own generating plants, and that therefore they could handle 60 cells just as economically as they could 64, which of course is true. The main objection to using 64 cells was the increased battery compartment required, which the size of their wagon does not conveniently permit. They are having designed a number of larger wagons, which are to use the E-45 battery and which had been laid out for 54 cells. This matter was thoroughly discussed, and I believe that Mr. Snyder was convinced that it would be proper to use the same number of cells in both cases, in order to facilitate charging. Kindly treat this latter piece of information as confidential, as it is not generally known that they are equipping a line of large wagons as well as the small, although you may be already posted on this matter.

In regard to the matter of equipment for the 2500 lb. vehicles, would state that Mr. Snyder did not bring up this point

E. W. M. - 2.

with me, and I would not be in a position to state definitely which motor in my opinion was best adapted to the work, without knowing the weight of the vehicle, together with the speed required and other information. With such information, I shall be very glad to give Mr. Snyder my unbiased opinion, and I might say that in general I should always recommend the larger motor without having any particular data at hand, as we all know that a large factor of safety or overload in these motors is a very good thing.

I will take this matter up further with Mr. Gere of the Champion Wagon Co., whom I met at the laboratory some time ago.

Yours very truly,

EDISON STORAGE BATTERY CO.

6/10/04/AHW/C.

The Pope Motor Car Co.,
Indianapolis, Ind.

Dear Sirs:

Replying to yours of the 1st inst., would state that we regret exceedingly that you have seen fit to cancel the six remaining orders which we have on our books. However, we feel that you are perfectly justified in doing this, as we have been unable to keep our promises satisfactorily in regard to shipments, and we fully appreciate that the active season is practically at an end. We trust, however, that we will be in a position in a short time to fill orders without delay, and shall be pleased to receive orders from you at a later date, as required by your Patrons.

Thanking you for past favors, we are,

Very truly yours,

EDISON STORAGE BATTERY CO.

6/10/04/AHW,C.

Studebaker Bros. Mfg. Co.,
South Bend, Indiana.

Gentlemen:

Replying to yours of the 2d inst., in regard to the matter of Mr. Mallory's automobile, would state that this machine consumes 47 amperes on hard level roads. The size of the driving sprocket is 14 teeth. This machine we calculate should not consume over 35 amperes, and we believe that the trouble is with the motor, since the running gear has been entirely gone over and properly aligned. In regard to the reliability of the vehicle, would state that there is no complaint on this score whatever, the vehicle having been run continuously and given good service, but you can readily understand that if we can decrease the current consumption from 47 amperes to 35, it will materially increase the mileage, which would be a very desirable point. We would be obliged to you if you could forward us a sketch or blue-print, showing the necessary alterations which would have to be made in the frame to accommodate the new motor referred to.

Awaiting your reply, we are,

Yours very truly,

EDISON STORAGE BATTERY CO.

6/10/04/AHW/C.

The S. S. White Dental Mfg. Co.,
5 Union Square, W., N. Y. City.

Gentlemen:

Replying to yours of the 9th inst., would state that the letter which we wrote to Dr. Varage has been mislaid, but the writer recollects the general contents. The Doctor was quite worried from the bubbling of these cells while on charge and after being taken off charge. This bubbling is perfectly normal in the battery, and will continue for hours after the battery has been taken off charge. It does not indicate local action, but is simply the hydrogen gas which has generated in charging working out from the pockets. We informed the Doctor that as long as the battery gased freely it was in proper working shape, and when the battery ceased to gas on charge there is some trouble.

Trusting this will make the matter clear, we are,

Yours very truly,

EDISON STORAGE BATTERY CO.

6/10/04/AHW/C.

Mr. Chas. T. Hughes,

General Electric Co.,

44 Broad St., N. Y. City.

Dear Sir:

Your letter of the 27th ult. to Mr. Edison, has been referred to the writer, and in reply I beg to state that I am this day taking up the matter with Mr. Churchward, and will do everything in our power to equip this vehicle to your satisfaction. I will get the necessary information from Mr. Churchward, and feel sure that the details will be carefully attended to.

We are,

Yours very truly,

EDISON STORAGE BATTERY CO.

6/10/04/AHW/C.

United States Express Co.,

8th & Henderson Sts., Jersey City.

Gentlemen:

We beg to acknowledge your order of the 4th inst., for 15 sets of type E-27 Edison batteries, consisting of 60 cells each to be arranged in five-cell crates. We shall endeavor to make delivery of the first battery, as requested, on the 15th of July, and at the present time can see no reason why this promise cannot be fulfilled. We will also endeavor to deliver the remaining 14 sets at such dates as you may specify later to be most convenient to you. These batteries will be delivered to you fully charged and equipped, ready to be placed in the vehicle.

In regard to the guarantee on these batteries, would state that we guarantee them to be free from defects of workmanship and material for a period of one year, and stand ready to make good any defects of this nature which may arise within that time.

Confirming the conversation of our Mr. Whiting with Mr. Snyder, we beg to impress upon you again the advisability of placing the same number of cells in both your 2,000 and 4,000 pound wagons, as it will facilitate the charging of these vehicles very greatly, and will be much more economical to operate, doing away with rheostats or booster service.

U. S. E. Co.

-2-

6/10/04.

We shall be pleased at any time to furnish you with any information in our power to assist you, either in the equipment or in the operation of your vehicles, and will call upon you at any time at your solicitation.

Thanking you for your order, we are,

Yours very truly,

EDISON STORAGE BATTERY CO.

6/10/04/AHW/C.

Mr. T. D. Gere, Mgr.,
Champion Wagon Co.,
Owego, N. Y.

Dear Sir:

The writer had a lengthy interview with Mr. Synder of the U. S. Express Co. yesterday, and he informed him that you are designing some 4,000 lb. wagons for their service. He stated to me that Mr. Maxim recommended using 54 of our type E-45 cells. As they are equipping their small wagons with 60 of the type E-27, it would be most advisable to use the same number of cells in the larger wagons, as it will facilitate the charging of these batteries, and will do away with rheostats or boosters, whichever system might be adopted. I wish that you would communicate with me at your early convenience on this subject, as we want to do everything in our power to give the U. S. Express Co. the best of service, and in our opinion it would be a gross mistake to equip these large wagons with only 54 cells.

Awaiting your reply, I am,

Yours very truly,

CABLE ADDRESS
"AUTOMOBILE"
INDIANAPOLIS.



W.U.T. CODE,
A.B.C. CODE,
[4TH EDITION]

Indianapolis, Ind.

June 11, 1904.

Edison Storage Battery Co.,

Orange, New Jersey.

Gentlemen:-

We acknowledge receipt of your favor of the 1st. It is exceedingly interesting to note that you are furnishing us with circulars to be shipped with each battery, giving directions for assembling etc.,

Now, this would be highly satisfactory to us if we were getting deliveries on batteries. You will note that we have gone to considerable expense to bring out a special Edison Model, we are advertising it in magazines and, general circulation, but, it would seem that we are very much handicapped in obtaining deliveries of the battery.

Will you kindly inform us, for the information of the Sales Department, of this Company, just what we can expect on deliveries?

Yours very truly,

NATIONAL MOTOR VEHICLE CO.,

Dict. TJH/B.

Thurday.

6/13/04/AHW/G.

National Motor Vehicle Co.,
Indianapolis, Ind.

Gentlemen:

Replying to yours of the 11th inst., would state that we will this week be in a position to make fairly prompt deliveries, and we are at the present time doubling the capacity of our plant, in order to take care of our patrons in much better shape than heretofore. We have experienced some difficulty with our automatic machinery, and we believe at the present time that we have remedied all the faults developed. We desire to do everything in our power to fill your order as promptly as possible, and feel sure that the service rendered by this company will in future be satisfactory in every way. We have only one set of batteries on order for you at the present time, and we will endeavor to make shipment of these the first part of next week, if not before.

Trusting this will be satisfactory, we are,

Yours very truly,

EDISON STORAGE BATTERY CO.

C. L. Colman, President

C. L. Colman, Vice President

H. L. Colman, Secretary

C. L. Colman Lumber Company

Manufacturers and Dealers

La Crosse, Wis.

JUN 16 1904

June 13, 1904.

The Edison Storage Battery Co.,

Orange, New Jersey.

Gentlemen:-

I recently purchased of the National Motor Vehicle Co. of Indianapolis, Ind. a "National Stanhope" containing forty of your E-18 cells. When charging the battery at the rate of 40 amperes, what will the volt meter read when battery is full? Two of the cells have leaked and I have had them resoldered here. The National Company have sent me one cell with electrolyte to replace the first one that leaked. Will not ordinary solder withstand the action of the caustic potash solution? Cannot the electrolyte be prepared by a chemist here instead of being shipped by your factory? Is the electrolyte simply a 20 per cent solution of caustic potash and distilled water? Kindly answer the above and give me any further information regarding your battery and oblige.

Yours respectfully,

C. L. Colman

6/14/04/ATW/C.

Mr. C. W. Faylor,
Newton, Iowa.

Dear Sir:

Replying to yours of the 8th inst., we beg to state that we have taken up the matter of motor, &c., with the Crocker Wheeler Co., but as yet have not received any reply. They are working on this proposition, and as soon as we have any information we shall take great pleasure in forwarding it to you at the earliest possible moment.

Yours very truly,

EDISON STORAGE BATTERY CO.

The Oxford Copper Company.

COPPER AND NICKEL ORES, MATES, BULLION, ETC.
GENERAL OFFICES, 72 BROADWAY, NEW YORK WORKS AT CONSTABLE HOOK, N.J.
CABLE ADDRESS "QUEBATH" NEW YORK.
43 EXCHANGE PLACE

SAMUEL A. BENNETT,
PRESIDENT.

New York

June 14, 1904.

No. 3

Mr. W. S. Mallory, Vice President,
Edison Storage Battery Company.
Orange, N. J.

My dear Mr. Mallory,

Confirming our conversation of yesterday in my office here in New York, we will send you immediately two metallic nickel plaquettes, weighing about 36 lbs. each, so that you may try the same in your electro-plating.

Please understand that these plaquettes are really rough blocks that we now produce for use in steel making. They are simply dumped into the steel furnace and remelted, so there is no necessity for making them exact to size. I think, however, that if you can use with a grade of nickel in your electro-plating, we can make you a cast anode of the same grade of nickel suitable for your use. This, however, will depend largely on the amount of nickel that you could order of each shape at one time.

Yours very sincerely,

Samuel A. Bennett
President.

SAB/G

ack + return

*We have received this & will
arrange for Mr. & send also to
H.R. to use in their bath
& see how it works in practice
will report on conclusion of test.*

"TOLEDO" GASOLINE.

"TOLEDO" STEAM.

POPE MOTOR CAR COMPANY.



INDIANAPOLIS FACTORY.



WAVELEY INDIANAPOLIS.
LIEBERMAN & B. C. 4TH EDITION USED



TOLEDO FACTORY.

Indianapolis Ind June 16th, 1904. JUN 20 1904

Edison Storage Battery Co.,

Orange, N. J.

Dear Sirs:-

We are mailing you under separate cover our regular form of order calling for 4 only E-18 cells that are to be shipped direct to one of our customers at Cedar Rapids, Iowa. We have also requested that you send 4 of your 9 cell trays, so that he can change the 32 cell battery he now has into a 36 cell. We are compelled to furnish the four extra cells, no charge, and therefore think that under the circumstances you should furnish the extra trays gratis.

It is very important that immediate shipment be made, as the gentleman in question is more than dissatisfied with the results he is obtaining from his car. We therefore trust that this order will receive your special attention and that you will do everything in your power to expedite delivery. Let us have definite information from you by return mail advising just exactly when you anticipate forwarding same.

Yours truly,

Pope Motor Car Company,
WAVERLEY DEPARTMENT

Mark R. Brown

M.C. O'C-F.A.

Purchasing Department

June 17, 1904

Mr. E. L. Coleman,

La Crosse,

Wis.

dear Sir:

Replying to yours of the 13th inst. would state, the Edison cell on charge when nearly full will read about 1.85 volts per cell. You cannot, however, judge as to the amount of charge in your battery by this voltage, as you will find that shortly after being put on charge, the voltage will rise to over 1.8 volts per cell, and will remain constant throughout the remainder of the charge.

In regard to leaky cells we would state that ordinary solder will not last on these jars, as the potash solution will attack it rapidly. We will not be responsible for cells in which electrolyte other than that furnished by ourselves, is used, as we find the commercial potash is not sufficiently pure for our purpose, and we subject the potash here to special chemical treatment whereby all trace of impurities are removed.

Should you have any further trouble with leaky jars, we would be pleased to have you communicate with us and we will forward you without delay cells to take the place of the defective ones.

Very truly yours,

Edison Storage Battery Co.

AHW/L

June 20, 1904

Pope Motor Car Company,

Indianapolis,
Ind.

Gentlemen:

Replying to yours of the 16th inst. would state, we are forwarding to Cedar Rapids, Iowa, 4 E-12 cells, 4-9 cell crates for the same. We shall be pleased to give you credit on the old crates when returned, as we appreciate that adding 4 cells to this equipment is going to make a much better showing for the Edison Storage Battery Co., as well as for the Waverly Company,

Trusting this is satisfactory, we are,

Very truly yours,

Edison Storage Battery Co.

ARW/E

P.S. These cells went forward today.

HENRY M. LEWIS,
PRESIDENT.

WILLIAM R. GILBERT,
GENL. MANAGER.

CONSTANT E. JONES,
SECRETARY.

GEORGE R. ROBINSON,
TREASURER.

The S. S. White Dental Manufacturing Co.

FOUNDED BY S. S. WHITE IN 1844 - INCORPORATED IN 1881

MAIN OFFICE
CHERRYBUT AND TWELFTH STS.
PHILADELPHIA

PUBLISHER DENTAL COSMETOS

TELEPHONE 24-1678 ST

Spingler Building
5, 7, and 9 Union Square West

New York

BRANCHES

NEW YORK, CHICAGO,
BOSTON, BROOKLYN,
ATLANTA, ROCHESTER,
BERLIN, BUENOS AIRES,
ST. PETERSBURG, TORONTO.

CABLE ADDRESS NEW YORK HOUSE
"WHITENT"

1019 271 100

Edwin Strage Battery Co.,
Key Ridge, N. J.
Butlermen;

June 21, 1904.

Enclosed find orders # 3949-3950 which
please give your usual prompt and careful attention.
Kindly advise us when you expect to get
around to the time when you can allow us a
discount on orders we are sending you.

Sincerely,

THE S. S. WHITE DENTAL MFG. CO.

W. S. Bennett.

Parsons Newark June 24/04

JUN 25 '04

My dear Sir:

I see in this evening's News that your large plant at New Village has again resumed operations. Mr. Edison, is there any prospect of securing a position of some kind there? I formerly worked for you some years ago at your factory at Harrison in the Pump Room so we could it.

Mr Edison, if there is
anything you could do for me
in any way, it would be
very greatly appreciated by
me. Hoping, my dear Sir,
to receive your most favorable
reply, I beg leave to remain
with high respect,

Your most obedient servant
Wm Hopper
66 Elmwood Ave
Newark

To
Hon^r
Thomas A. Edison

Mr Wm Hopper was Super
at that time. I am at present
out of employment, and being
a married man (and one who
does not care to be idle,) I
concluded to ask you for a
position of some kind. My
former employer has disposed
of his business, and sailed for
Europe July 6th, otherwise I
would still be employed. My
position was bookkeeper and
freeman. I do not use
drink, and am a steady
man, and attentive to my
duties.

June 22, 1904

S. S. White Dental Mfg. Co.,

5 Union Square, West,

N.Y.

Gentlemen:

We beg to acknowledge your orders #3949 and 6450 calling for 4 type E-18 cells with accessories and catalogues.

We shall endeavor to ship these batteries to you inside of the next two weeks and trust this will be satisfactory.

In regard to allowing you a discount from our present list price, would state, this matter has not as yet been taken up but it will undoubtedly be several months before we are in a position to quote anything off our list price.

Thanking you for your orders, we are

Very truly yours,

Edison Storage Battery Co.

AHW/L

"ALIS VOLAT PROPUS."



LIEBIG'S ORANGE BOTTLES USED
CARBON ADJUSTABLE
"BAKER" CLEVELAND.

The Baker Motor Vehicle Co.
Manufacturers of
High Grade Motor Vehicles
Mr. J. H. Foster, Treasurer
General Agents and Co. A. H. H.
Long Distance Telephone
South House
Cleveland, O. June 23rd, 1904.

Mr. W. S. Mallory,

The Edison Storage Battery Co.,

Orange, New Jersey.

JUN 24 1904

Dear Sir:-

Yours of the 20th is at hand. We received your telegram and we now have your letter. Mr. Owens did pay us a week or two ago for the batteries and instructions were given our cashier to send you check for that set, but this was overlooked. Now we have two other sets of batteries out from which we have heard nothing and we suppose they are giving good satisfaction. The other sets of batteries are a matter of considerable doubt. We have now instructed our cashier to forward you a check for these three sets. We believe we are going to have considerable trouble with the batteries that we have purchased. We have one set in Utica in which the mileage drops right down, but we have not had time to send a man there to find out about it, but these items are a good deal of expense and trouble to us to have to keep sending men to different cities to post them up on Edison batteries. We have a set here that is impossible to keep up; that is the internal resistance of the batteries is such that they drop right down every time they strike a hill.

We will see you personally at a later date and go over this matter thoroughly. In the meantime, we remain

Yours very truly,

The Baker Motor Vehicle Co.

W. S. Mallory

C.-No.1.

[ATTACHMENT]

Baker & V Co

Re -

D.S.

your ^{order} is noted

and it is not at all satisfactory to
us - we shipped ~~you~~ ^{these} batteries when
we could have shipped them to your
competitor and received prompt
Cash - ^{any of} if the batteries are not
satisfactory we propose to stand
behind them - we most however
insist that you either return the
batteries to us or send payment at
once.

Yours

American Briquetting Machinery Company,

SUCCESSORS

The Henry S. Mould Company

GENERAL OFFICES: EMPIRE BUILDING.

BRIQUETTING MACHINERY

ALL AGREEMENTS ARE CONTINGENT
UPON OTHERS, ACCIDENTS AND OTHER DELAYS BEYOND OUR CONTROL.

Pittsburg, June 25, 1904.

Messrs. Pilling & Crane, Agents,
Chateaugay Ore & Iron Co.,
Girard Building,
Philadelphia, Pa.

Mould
27

Gentlemen:-

We beg to say that we have secured the American rights to a Briquette Finishing Process, which we think will be of interest to you.

We do away with the use of any binder, simply using sufficient moisture to make the Concentrated plastic, briquette under heavy pressure and give the briquettes a heat treatment, which causes the fusion of the silica in the ore and produces briquettes of such hardness and general good qualities as we have never before been able to do with any binder.

This Process was discovered in Sweden by the Chief Engineer of the Dunderland Ore Company, a very large English Corporation, who control a large deposit of low grade magnetic ore in Norway, and which to make their proposition a commercial one needed a successful Briquetting operation.

This Company is headed by Sir David Dale, who is also at the head of the Consett Iron Works, Lord Armstrong, Lloyd Williams of Middlesboro, Mr. Martin of Ebba Vale Iron Works, Lord Kelvin, W. Rhodes, Sir. J. Lawrence, Commander F. H. Pollen, etc., who represent the principal iron and steel interests in Great Britain.

P. & O. - #2

The Process as operated in Sweden was found to be of the right principle, but very crude, and has been improved and perfected and is to be used in a Plant now building in Norway to briquette 2500 tons per day of Magnetic Concentrates, and for which Plant we have the Contract and are building the Briquetting Presses and Apparatus.

For some considerable time a small Plant of this principle has been operated near London in order to demonstrate fully on a commercial basis.

We are prepared to erect a Briquetting Plant with this system of any size capacity, and in this connection would say that we have redesigned and very much improved our Press and Apparatus.

If you desire to have some tests made in England on your Concentrates, we would be very glad to have this done at no expense to you except the freight on the material, and if you are inclined to send some over, say a barrel or two, we would be glad to give you shipping directions.

While the Plant installation cost is somewhat higher than we have heretofore figured on, the cost of operation is much lower than we have ever been able to figure using any binder.

Trusting to have your views on the subject, We are,

Yours very truly,

AMERICAN BRIQUETTING MACHINERY COMPANY,

Henry S. Mould
President.

E 5 B 60

JOHN JACOB ASTOR,
ESTATE OF WILLIAM ASTOR.

NY 23 WEST 25TH STREET.

*Answered
July 13/04*

New York. July 13th, - 19 04.

Dear Mr. Edison,-

I was very glad to get your letter of July 1st.
Can you tell me how much of the Edison Battery Company's stock Mr.
W. S. Pilling wishes to sell?

Thanking you very much for your kindness in
looking into this matter,

Yours very sincerely,

J J Astor.

J J Astor -

There being some delay in
receiving your answer I find Mr Pilling
sold as much as he is willing to sell at
the original price he paid and now says that
he will not sell any more except he obtains
 $\frac{1}{2}$ of the stock he got as a bonus perhaps he
will relent in time as I know he is terribly
hard pushed for ready money.

Edison

THOMAS A. EDISON,
PRESIDENT.

W. S. MALLORY,
VICE-PRESIDENT.

J. F. RANDOLPH,
SECRETARY-TREASURER.

EDISON STORAGE BATTERY CO.,

GENERAL OFFICE:
EDISON LABORATORY,
ORANGE, N. J.

TELEPHONE, "211 ORANGE"

WORKS:
GLEN RIDGE, N. J.
SILVER LAKE, N. J.
HENRYOLD JANNEY, MANAGER
TELEPHONE, "70 BLOOMFIELD"

*Address in correspondence
to Glen Ridge, N. J.*
GLEN RIDGE, N. J., July 22, 1904

Mr. J. F. Randolph, Treas.,

Edison Storage Battery Co.,
Orange, N. J.

Dear Sir:

Replying to yours that I would state, we have been paying 40 cents per gallon for our dynamo oil from the Crew-Levick Co., which we will try to improve. The oil which we had previous to this gave a great deal of trouble and we, therefore, substituted the higher priced oil.

In regard to electrical supplies, we purchase everything which is not in a great rush, from New York house, on account of their price, but a great deal of material is wanted at once and is purchased in Newark, as it can be sent out at once on the trolley cars. We will, however, purchase whatever is possible from the N.Y. house instead.

Regarding the Hungerford Brass & Copper Co., would state, they have been out out for sometime as their prices were too high. We are purchasing brass from the Ansonia Brass Co. at a much reduced price.

The lettering of 3 sheets of Storage Battery curves was done for the St. Louis Exposition, where these curves are now framed and on exhibition. This work was done after consulting Mr. Mallory and I closed the contract personally for it. It is only a slight increase over what we pay our regular workmen, and of course, for this work

J. F. R.

- 2 -

July 22, 1904

we have to have a clean, neat job and consequently paid a good price for it.

I would like to call your attention to the fact that among the letters which were sent to this office on the 20th inst. were a great many dating back as far as July 3th. Some of these letters were very important and in some cases a second letter had been written requesting that a reply be sent to the first letter. It would appear whoever is in charge of the mail at Orange should be requested to forward this matter to us without delay in future.

Very truly yours,

W. L. Loring

AHW/L

~~Edison~~ Whiting - See Aylsworth
about this & decide what
to do - Edison 28 501

Mr. Wm. H. Mallory

Dear Sir,

We have
received from your Gen. Rags worth
order for car of Electrolytic Lanthia,
which we will deliver promptly, but
would ask you to kindly send
us order to cover from 3th 6 months
consumption, so that we may
be able to take good care of you

Respectfully

American Salt Supply Co.
John C. Lowell

Phone
Whiting
7/26/01

THOMAS A. EDISON,
PRESIDENT.

W. S. MALLORY,
VICE-PRESIDENT.

J. F. RANDOLPH,
SECRETARY-TREASURER.

EDISON STORAGE BATTERY CO.,

GENERAL OFFICE:
EDISON LABORATORY.
ORANGE, N. J.

"TELEPHONE, "811 ORANGE."

WORKS:
GLEN RIDGE, N. J.
SILVER LAKE, N. J.
REYNOLD JANNNEY, MANAGER.
"TELEPHONE, "70 BLOOMFIELD."

GLEN RIDGE, N. J.,

Sep. 21, 1904

Alexander Elliott, Esq.,

Orange, N. J.

Dear Sir:

I attended the meeting of the creditors of the Gibbs Co. yesterday at the office of Mr. McDougal Hawkes, and as the appraisers have not yet completed their work, there was practically nothing done, as Mr. Hawkes stated that it would be necessary to have their figures before us before any definite steps could be taken towards clearing out the business. It seemed, however, to be the general opinion that it would not pay us to continue the business or to complete any of the vehicles now in construction. As the meeting was considered very informal, no decided action was taken in this matter, nor in fact on any other points of interest. The General Electric Co. is investigating at the present time, the contract with the Borax Company with a view to forcing them into a compromise on their contract as they believe that the Borax Co. can be held liable for this contract, and that we may, therefore, get some small return for allowing them to break the contract.

In regard to the ^Atrator train, it was the universal opinion of those present that this proposition was too much of an experiment to warrant the investment of further capital toward perfecting this train, as the chances are that even were the train completed, it would require a considerable amount of capital to do the necessary amount

THOMAS A. EDISON
PRESIDENT

W. S. MALLORY
VICE-PRESIDENT

J. F. RANDOLPH
SECRETARY-TREASURER

EDISON STORAGE BATTERY CO.,

GENERAL OFFICE:
EDISON LABORATORY
GRANOS, N.J.

"TELEPHONE, "B11 ORANGE"

WORKS:
GLEN RIDGE, N.J.
SILVER LAKE, N.J.
REYNOLD JANNEX, MANAGER
TELEPHONE, "TO BLOOMFIELD"

A.E., Esq., #2

GLEN RIDGE, N.J.

Sept. 21, 1904

of experimenting to make the train practicable.

Mr. Shadbolt is going to take up the matter of having the Vehicle Equipment Co., of Brooklyn, N.Y., finish up the 2 Brewery trucks now on hand, with a view to disposing of them. Neither Mr. Dean nor Mr. Gibbs presented any figures as we had expected, showing the amount of money necessary to complete the various machines in process of construction, and for this reason, it was deemed advisable to get figures from the Vehicle Equipment Co. on this work.

At the last moment Mr. Tuft of the Studebaker Co. said he would take up the matter of buying out the Company, with his home concern, that is, the Studebaker Bros., of South Bend, Ind. He stated that there was a bare chance of their being willing to do something along these lines, and would report to the committee as soon as he could obtain a statement of the inventory, etc., and forward the same to South Bend.

The meeting was adjourned to meet at the same place at 3 o'clock next Monday afternoon, and I trust you will be able to be present.

Very truly yours,

AHW/L

A. H. Whitney

- This letter sent to Vehicle Equip. Co., Pope Co., Studebaker Co.,
National Co., Woods Co., Baker Co. + *Smiley*

Oct. 20, 1904

Baker Motor Vehicle Co.,

Cleveland,

O.

Gentlemen:

We have been manufacturing cells regularly for several weeks with an output of over two hundred cells per day, which we will increase to three hundred and more, as soon as additional machinery, which is now being built, is installed.

All cells now being manufactured are contained in welded cans, all of which are tested by pressure before being shipped, and we believe the trouble from leaky cans has been overcome.

We will soon advertise extensively that our cells are ready for the market and hope to work up quite a demand for them.

While as yet all cells sold at list price represent a loss to us, the cost of manufacture has come down somewhat and in accordance with our past promises, while our selling price will still be list, and our terms net thirty (30) days, we have decided to give you a special discount of five (5) percent for cash, provided same is mailed us within ten days from date of invoice and not otherwise. Later on, when the manufacturing costs come down more, we expect to give you a larger discount. Our price to the public will be list less 2% cash in ten (10)

Baker M.V.Co.,

- 2 -

Oct. 20, 1904

days from date of invoice. we can make deliveries now in from four to six weeks and in special cases might deliver somewhat earlier.

We shall be pleased at any time to help you in any way possible to effect sales of vehicles containing our batteries.

Trusting that we may receive many orders from you, and thanking you for past favors, we are,

Very truly yours,

WSM/L

V.P.

THOMAS A. EDISON
President

W. S. MALLORY
Vice-President

J. F. RANDOLPH
Secretary-Treasurer

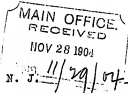
EDISON STORAGE BATTERY CO.

Telephone, 76 Bhamfeld

GLEN RIDGE, NEW JERSEY

11/26/04/WSMP.

Mr. W. E. Gilmore, Vice Pres.,
Edison Manfg. Co.,
Orange, N. J.



My dear Gilmore:

On December 1st next we will close down the Plant at Silver Lake, keeping on a day and night watchman. Most of the time there will be one or two other men at the Plant.

We would greatly appreciate it if you would arrange so that in case of fire the employees of the Edison Manfg. Co. would assist our men either day or night as the case may be.

If you will arrange to do this for us I think it will save us considerable trouble with the Insurance Companies, from whom we have to get permission to shut down.

Yours very truly,

V.P.

E. F. C. YOUNG, President.

JOHN A. WALKER, Vice President & Treas.

GEO. E. LONG, Secretary.

CABLE ADDRESS: "GRAPHITE"
NEW YORK CITY, N. Y.
COVER USED
LITHO DESIGNED TELEPHONE "2000 JERSEY CITY"



WORKS AND GENERAL OFFICES, JERSEY CITY, U. S. A.
BRANCHES:
55 BRADLEY ST. NEW YORK
1030 ARCH ST. PHILADELPHIA
101 TREMONT ST. BOSTON
1000 N. 4TH ST. PITTSBURGH
25 VICTORIA ST. LONDON, S. W.

JOSEPH DIXON CRUCIBLE CO.
MINERS,
IMPORTERS AND
MANUFACTURERS
OF
**GRAPHITE,
PLUMBAGO, BLACK LEAD,**
Pencils, Crucibles, Stove Polish, Lubricants,
Paints and Graphite Products of all kinds.

TRADE
MARK

Joseph Dixon Co. (USA) Dec. 14, 1904
Oct 3 20 00
15

Railson Storage Battery Co.,
Glen Ridge, N. J.

Gentlemen: Answering yours of Dec. 13, we petition for a change of view on your part. Perhaps you are not quite aware what we did when we made your contract. You applied to us definitely for this graphite, mentioning that you would be pleased to have business with us. We then sent our representative to your office, and it was talked out. You were to make a contract which we have in hand, for 36,000 lbs., which you duly signed and sealed, being 3,000 lbs. per month. On the basis of this 36,000 lbs. contract, we made the price to you 10¢, whereas the usual price is 12¢. In other words, we took what was equivalent to nearly 20% off. Then the terms were that we should be paid once a month. We hope you can send us check by return mail.

We do not wish to be arbitrary, or what might be called unaccommodating, but we need our money badly, and expected to have it come in this way, after we made so low a price, and then the goods you know, have not been called for as per contract. We shipped you a bill in October, and there should have been another order in November and one in December, but we have only shipped one so far. In view of this, we think you will send check by return mail.

PLEASE.
Mark Reply to this Letter
Department A.

Yours respectfully,

Joseph Dixon Crucible Co.

Hardland

Follow up and see that ~~John~~
You get porcelain wheels delivered
for new strip placers be done
next Thursday. They were
ordered long ago. Elison

Form No. 1.

THE WESTERN UNION TELEGRAPH COMPANY.**\$4,000 OFFICES IN AMERICA. INCORPORATED CABLE SERVICE TO ALL THE WORLD.**

This Company TRANSMITS and DELIVERS messages only on conditions limiting liability, which have been accepted by the transmitter of the following message. Errors not indicated against only by repeating a message back to the sending station for comparison, and the Company will not hold itself liable for errors or delays in transmission or delivery of transmitted messages, beyond the amount of rates paid thereon, nor in any case when the condition presented in writing within forty days after the message is received by the Company for transmission. This is an **UNREPEATED MESSAGE**, and is delivered by request of the sender, under the conditions named above.

ROBERT C. LOWRY, President and General Manager.

NUMBER 26 BY Edison DATE 25 COLLECT yes CHECK yes
 TIME OF DAY 11:00 DAY OF WEEK Wed MONTH Apr YEAR 1904
 FROM Edison TO John Randolph

RECEIVED BY Edison CO. Apr 4 1904

Dated Fert Meyers Fla 4

To John Randolph

Edison Laboratory - Orange

I want How is Battery Building
Progressing first section Two hundred West
four stoves done when I left
how much more have they done
Edison

407

Battery - 30

TELEPHONE N.Y. 2912-3679 ST.

TELEPHONE CHICAGO, 1400 HARRISON.

Answered
May 23/05
Wesley Allison

J. Wesley Allison,
Hamberbilt Street 44th St New York
325 Proctor, Chicago

New York, May 5th, 1905. 100

~~Dear Mr. Randolph:~~

Don't think there will be any trouble

J. F. Randolph, Esq.,
Edison Storage Battery Co.,
Orange, N. J.

My dear Mr. Randolph:

*made me still working OK
& simply stopped until I called*
Your favor of the 2nd instant was the
first intimation I had that there was any trouble with the
battery. Is it going to effect the bondholders in any way,
as a number have purchased the bonds solely on my recommendation
and I would appreciate it very much if I could be kept advised
of the developments of the Company from time to time.

Thanking you in advance and with very kind regards,

I remain,

Yours faithfully,

Wesley Allison

2313 Co.

THOMAS A. EDISON
President

W. S. MALLORY
Vice-President

J. F. RANDOLPH
Secretary-Treasurer

EDISON STORAGE BATTERY CO.

EDISON LABORATORY

Telephone, "407 Orange"

ORANGE, NEW JERSEY May 18, 1905.

Messrs. W. G. Bee- A. E. Pratt- P. Weber:

So that there will be no further misunderstandings, it is my desire that no further orders for materials or labor of any kind be issued except same are approved by Mr. Edison, Mr. Weber or myself. Of course, when it comes to productive material, Mr. Weber can pass on this, but I want no supplies or any purchases made unless either one of us approve same. In other words, I want to keep all expenses down to a minimum.

W. S. Mallory

(Copy to Mr. Edison)

ESB Co.

COCHRANE CHEMICAL CO.

MANUFACTURERS AND IMPORTERS OF CHEMICALS,

Office, 55 Kilby Street, Boston.

ALEXANDER COCHRANE,
President.
LINDSEY LORING,
Treasurer.

BOSTON, December 26th, 1905.

DEC 28 1905

The Edison Chemical Co.,
Orange, N.J.

Gentlemen:-

We are in receipt of yours of December 23rd in relation
to 20° Hydrochloric Acid.

We should like to ask if this Muriatic Acid is to be used
in this vicinity or if it will have to bear a long transportation, as
this would have some bearing on the price.

Kindly inform us on this subject and greatly oblige.

Yours truly,

COCHRANE CHEMICAL CO.

By *W. J. Wether*

D/WJW

The acid is to be used at the works
at Orange N.J. - when our plant
is complete we shall use about
3 tons of 20 degree Hydrochloric
daily
Edison Chem Wks

ESB.C.

P. H. KLEIN JR.
187 CEDAR STREET
NEW YORK

DEC 28 AM '05

Dec 27/05

Edison Storage Battery Co.
Orange N.Y.

Sir: A week ago I sent you a letter dated Dec 19th which I had just received from the Stanley Works, referring to their having shipped you steel which they had made on my order for Berlin and asked you to return it after reading & advise me about the transaction.

Please let me hear from you rather matter at your early convenience and very much oblige

Yours truly
P. H. Klein Jr

I have referred the letter to battery works with instructions to explain the matter to you = my impression is they stole the stock for the works to take care of Customers. The man who was up there told me Stanley Co would have new stock ready in 10 days, then was a week ago

E & C Co.

ROBERT H. REMMEY, President

MANUFACTURERS
CHEMICAL STONWARE
CHEMICAL BRICKS
CHEMICAL TILES
WHITE GLAZED STONWARE
FIRE BRICKS
FIRE BRICK TILES
FIRE CLAY
GROUND BRICK
FIRE SAND
BY THE TON OR CARGO

JOHN D. REMMEY, Secretary and Treasurer

HENRY H. REMMEY, Superintendant

Plant, Piquette River, 25-00
Executive Office, Main St.

RICHARD C. REMMEY SONS' CO.

2637-59 E. CUMBERLAND STREET

PHILADELPHIA December 28, 1905.

All Agreements
are contingent upon written settlements,
delays of orders, and other causes
beyond our control.

DEC 29 1905

Edison Chemical Works,
Orange, N. J.

Gentlemen:--

In reply to your letter of the 27th inst., beg to state, we can furnish the pottery parts for muriatic plant as shown in our illustrated catalogue. The retorts we do not furnish. These are generally built by the acid people themselves, being the most economical way in erecting plant of this kind.

Dia. E. H. E.

Yours very truly,

RICHARD C. REMMEY SONS' COMPANY,

Robert C. Remmey
PRES. & GEN. MGR.
E. & C.

Can you give me the address of a
Chemical Engineer who makes a
business of superintending erection
of hydrochloric acid plants
Edison

Feb 13 - 1906

Telegram

Express Agent
Cartersville Georgia

~~John Morris~~ anything
shipped by John Morris
will be paid at this end.
Thos A Edison

Chy Ed

John note about check
also address -

THOMAS A. EDISON
President

W. S. MALLORY
Vice-President

J. F. RANDOLPH
Secretary-Treasurer

EDISON STORAGE BATTERY CO.

Telephone, 3096 Montclair

GLEN RIDGE, NEW JERSEY Feb'y. 15, 1906.

Mr. Thos. A. Edison,

Orange, N. J.

Dear Sir:-

for Mabel Comptons only

In reference to pressure on small press at Laboratory would say that the diameter of ram is 2.733".

2.733 x 2.733" x .7854 equals 5.866 sq. inches of ram.

250 atmospheres x 15 lbs. per sq. inch x 5.866 equals 21998 pounds per pocket, or 11 tons per pocket, which equals 264 tons per plate of 24 pockets.

To get a pressure of 264 tons per plate on our hydraulics, ^{us} it would be necessary for/to get a press with a larger ram. We could then use our present pumps and piping and valves. The cost of such a press without accessories would be about \$400.00.

Very truly yours

W. S. Mallory

H.M. Wilson

Mar 30. 1906

Latchford, Ontario Canada

I will be home on the 8th
April. You better go to Balm.
and meet me at Laboratory any day
after the 8th when we will decide
about the Boiler etc.

Edison

B. Billings

NEW YORK

CHICAGO

MONTREAL

TORONTO

Call Address:
Waltham

APR 12 AMT

J. Wesley Allison
Morrising, Ontario, Canada

Morrising, Ont., March 31st. 1905.

J. P. Randolph, Esq.,

Treasurer, Edison Storage Battery Co. ~~etc~~ when
the summer
overseas,

We hope to make some money

Dear Mr. Randolph:-

How is the Battery Co. getting along? If
consistent and not giving you too much trouble, I would be pleased
if you will give me some information as to the progress you are
making.

Thanking you in advance and with very kind
regards,

I am,

Faithfully yours,

J. Wesley Allison

Apr 26. 1906
Telegram —

John Morris

Buena Vista

New

~~Webster~~ ME

~~Dillabone~~

ME

Go to Raleigh North Carolina

See Boyden — some of roads
recovered from Wake County

Very good, better prospect

~~than~~ than for a while

perhaps you can get Carload

wanted from there

Belmont from the man

answer where will we send money

Edison

Called "Edison" Edison, N.Y. 10/06

*From the Laboratory
Thomas A Edison*

Subject, —

Orange, N.Y. May 10/06

Telegram —

G A Longnecker

*Mechanicsburg, Lancaster Co.
Penna*

Telegram

*Will pay twenty five per
week and expenses*

Edison

E. S. B. Co.

Mechanicburg Pa May 11-1906

Thos A. Edison
Orange N.J.

Accept offer and wait your
instructions.

H. G. Langbecker.

Complete by Monday
Edison

Telegrams

E. B. L.

Build Robert's Dream

at Green Lake

Lot No 1829

Orange Building Co 1/012668

May 16/1906

J. F. OIT.

TELEPHONES 9978 AND 5576 CORTLANDT.

THE NEUCHATEL ASPHALTE CO. L^TD.

265 BROADWAY, NEW YORK.

Concrete Foundations,
Sidewalks, Driveways, and
Reinforced Concrete Construction.

Waterproofing

SOLE CONCESSIONAIRES OF THE
VAL DE TRAVERS ASPHALTE MINES,
SWITZERLAND.

Asphalt Floors
for Basements, Landfills,
Stables, Breweries, Stores, Mills etc.

Tile and Asphalt Roofs

August 27th, 1906.

Emil Herter, Esq.,

Edison Storage Battery Company,

Orange, New Jersey.

Dear Sir:-

Referring to the matter of the asphalt wearing surface to be laid on the new floor of the battery room at the above plant and as promised we now take pleasure in advising you that the quantity of sand required will be fifty (50) cubic yards.

We find we can use the fine sand from your pit and obtain good results but should prefer to use some coarser sand with the fine if there is any of the latter to be had. If so we shall be glad if you will arrange to have carted to the building where the asphalt is to be laid 35 yards of fine sand and 25 yards of coarse sand.

As this will have to be screened we have allowed sufficient to cover waste in the above quantities.

Our requirements in the way of wood to heat the asphalt will be about from 12 to 15 cords and if you can supply us with this quantity at a moderate price from the waste lumber left from the concrete, ^{wood can} shall be glad if you will do so.

Thanking you in advance for your kind attention to the matter of the above supplies, we beg to remain,

Yours very truly,

THE NEUCHATEL ASPHALTE CO. L^TD.,

per

R. B. Rutledge, Esq.

TELEPHONES 8978 AND 8979 CORTLANDT.

THE NEUCHATEL ASPHALTE CO. L^TD.
265 BROADWAY, NEW YORK.

Concrete Foundations,
Sidewalks, Driveways, and
Reinforced Concrete Construction.

Waterproofing.

SOLE CONCESSIONAIRES OF THE
VAL DE TRAVERS ASPHALTE MINES,
SWITZERLAND.

Asphalt Floors
for Basements, Laundries,
Stables, Breweries, Stores, Mills etc.

Tile and Asphalt Roofs

August 30th, 1906.

Emil Herter, Esq.,

Edison Storage Battery Co.,

Orange, N. J.

Dear Sir:-

We are in receipt of your favor of the 29th inst. and thank you for your assistance in arranging for the carting of sand to the building where the asphalt floor is to be laid and also for the information concerning the wood to be used for fuel.

We are also in receipt of an official order #13227 for the execution of the asphalt work but note that no reference is made thereon to the lining of the gutters which we charge for by the lineal foot at a higher rate than for the floor surface, as the work takes much longer to do and is much more costly.

A reference to our bill for the similar work executed at your works at Silver Lake, will show that the cost of the asphalt floor laid there was 15¢ per square foot and 35¢ per lineal foot for the gutter. In order to avoid any misunderstanding we shall be glad if you will kindly forward us a supplemental order for the gutter work or if you prefer we will return the order received for correction.

Yours very truly,

THE NEUCHATEL ASPHALTE CO. Ltd.,

per

H. B. H. M.
Manager.

R.B./H.M.

GEORGE MERCK

MERCK & CO.
MANUFACTURING CHEMISTS
NEW YORK,

October 1/06
DUTY

WORKS,
ST. LOUIS
and
RAHWAY, N. J.

E. MERCK'S
DARMSTADT
LABORATORIES
Founded 1668

The Edison Storage Battery Co.,
Glen Ridge,
N. J.

Gentlemen:-

Referring to your order of the 26th ultimo,
we regret that we were unable to include

3 ozs. POTASSIUM PHOSPHIDE, in ozs.
3 ozs. ACETAMIDE, in bulk - *we get this from*
15 gms. POTASSIUM TELLURATE, 1 vial *Emery's brand*

as we do not carry any of these articles in stock. Our Labora-
tories manufacture all of the products and we should be glad to
import them for you. Kindly advise us whether you wish us to
do so.

Awaiting your further advices, we are,

Yours truly,

Attested: *mm*

MERCK & CO.

J
Ed Merck -

*In nearly every case when you do not
have the Chemical required we
can get it from Emery's brand - these
articles were wanted in your catalogue
by a res line as being in stock -*
2

GEORGE MERCK

MERCK & CO.
MANUFACTURING CHEMISTS

NEW YORK,

October 8/06

WORKS,
ST. LOUIS
and
RAHWAY, N.J.

G/EF/

E. MERCK'S
DARMSTADT
LABORATORIES
Founded 1668

The Edison Storage Battery Co.,
Orange,

N.J.

Gentlemen:-

We duly received your favor of the 2nd instant regarding the POTASSIUM PHOSPHITE, POTASSIUM TELLURATE and ACETAMIDE omitted from your recent order, and are at a loss to understand your statement that the articles mentioned are marked with a red line in our catalogue as being in stock, as we have no record of ever having issued a catalogue marked in such a manner.

Referring to your remarks that you can in nearly every case procure from Eimer & Amend goods omitted by us, we would state that we have communicated with this firm in the present instance and they inform us that they do not carry in stock Potassium Phosphite or Potassium Tellurate. They can, however, furnish from stock 3 x 1 oz. Acetamide and we should be glad to procure and forward this, if you wish us to do so.

Assuring you of our appreciation of your orders and of our willingness to procure any items that we do not handle when we can possibly do so, we are,

Yours truly,

Attested: *P*

MERCK & CO.

ES&Co.

OFFICE OF
JOSEPH BROOME
M. S. A. ENG.
CONSULTING CHEMICAL ENGINEER.
N. Y. OFFICE 125 LEXINGTON STREET.
NEW YORK CITY.
JOSEPH BROOME, M. S. A. ENG.
CONSULTING CHEMICAL ENGINEER.

Thomas A. Edison, Esq;

Orange, N. J.

My Dear Sir:

Referring to your esteemed favor under date of Aug 30th, in matter of proposed Hydrochloric plant, the writer would esteem it a favor to have you advise him when he may expect to have you call upon him, as arranged with you on July the 12th;

Awaiting your esteemed reply;

Yours with respect;

AS-B

REGISTERED ARCHITECT, STATE OF N. J.
QUALIFIED TEACHER OF BUILDING CONSTRUCTION; SCIENCE
AND ART DEPARTMENT ENGLISH GOVERNMENT.
F. S. A. ENG. MEMBER S. C. I.
BROOME C. V. CONCENTRATORS.
" COMBINATION FILTERS AND SULPHUR BURNERS.
" EXHAUST SYSTEM FOR C. V. WORKS.
" LEAD ACID EDS.
" PATENTED CHIMNEY CONSTRUCTION 785,332,
JULY 29, 1905.

October 27th; 1906;

I am not ready to
acknowledge yet
E

ASC-3, 1905-AM

WILLIAM A. EDISON,
President.

W. B. MALLORY,
Vice-President.

J. P. RANDOLPH,
Secretary-Treasurer.

NEW JERSEY AND PENNSYLVANIA CONCENTRATING WORKS.

GENERAL OFFICES:
EDISON LABORATORY,
ORANOH, N. J.

ORANOH TELEPHONE,
EDISON

"311 ORANOH,"
"S. H. DODGE,"

WORKS:
EDISON, RUSSEX COUNTY, N. J.
ON HIGH BRIDGE BRANCH, C. & N. R. OF N. J.
92 Miles from Newark City, N. J.

EDISON, N. J.

O. W. MILLER,
MANAGER.

November 12th, 1906.

Edison Storage Battery Co,
Silver Lake, N. J.

Gentlemen:-

Will we ship the fire brick belonging to the R & W boilers,
Expect car for second carload to day.

Yours very truly,

O. W. Miller
.....Manager.

P. S. Quite a number of the bricks are broken in taking down the
boilers, if you will give the number you require we will be able
supply them from other buildings.

(1906)

Heater =

find out from
man how they're
furnishing for the annealing
pots for welding

Furnish up the furnaces hydrogen tubes
+ details - also the Rolls with details
so we can order one made, also get
plans out for the general lay out of the
Rolling mill with the several rolls
also details of Reels - Benches
etc. = WE will grind the rolls up in the
tool room as they are not heavy & don't
need grinding often -

Also lay out the Hydrogen generating
plant about $\frac{1}{2}$ size of that at Silver
Lake - The gasometer to be $\frac{1}{2}$ their
Capacity = get bids for erecting the
same from the same man who built
the one at Silver Lake -

I think the Hydrogen plant should be out of wood & not cement on account of acids & Explosion —

Lay out the piping from the Hydrogen plant to the Welding Bldg also to the main Bldg leading to the Rolling mill & flake furnace —

Anything Mason wants as to Brute Rocs do — Watch the Brute rocs & see Everything is made ok — you should inspect the work down stairs on them —

Report to me anything you want to know to Florida up to March 27th — After which mail will be too late, Have Burroughs keep at the Battery work — Cask will arrange some work on Crane & painting drums & tanks ~~from~~ Therefore you should with the aid of the other druggist man take up the Rolling mill & furnace

[ATTACHMENT]

- 1 = Get catalogues & prices of tube mills complete
- 2 = Order the Crusher from Sturtevant,
- 3 = Order the screw Conveyors - use the Judgers & hangers for same as used at Cement works -
4. Order the Wilfey Table & Shimmer -
- 5 = Order the Elevator chain Buckets etc
try them -
- 6 = Get out working drawings for the Roasting furnace & all appurtenances
- 7 ~~Order~~ Get bids for motors from General Electric & Crocker
Wheeler & Bucklock -

ESBC

WILLIAM WILKE,
MECHANICAL, CIVIL AND CHEMICAL
ENGINEER,
86 NORWOOD AVENUE.

*Answered
Apr 8. 1907*

AGENT FOR
VEREIN CHEMISCHER FABRIKEN
IN MANNHEIM, GERMANY,
FOR THEIR PAT.
SULPHURIC AMYFORD (CONTACT) PROCESS
MECHANICAL SULPHATE PURNACE.

AGENT FOR
CHEMISCHE FABRIK RHENANIA
IN AACHEN, GERMANY,
FOR THEIR PAT.
DR. UEBELS' PROCESS FOR MAKING
NITRIC ACID

BUFFALO, N. Y. April 6th 1907

*Answered
April 27. 07*

Mr. Thos. A. Edison,

Orange, N.J.

Dear Sir:-

About a year ago I saw you in reference to a MURIATIC-ACID
Plant.

I should like to know whether you are still interested in
the project, if so, I shall be pleased to call upon you and submit
to you different propositions with figures all complete.

Yours respectfully,

Wm Wilke

*Decided not to erect the
Hydrochloric acid plant*

[Signature]

ESBG..

F. A. COFFIN,
34 PINE STREET
NEW YORK

*Purchased this
Stock at \$21250.00*

NEW YORK, April 27th, 1907.

Mr. Thomas A. Edison,
Orange,
New Jersey.

Dear Sir:-

Referring to my letter to you of the 5th inst. and to
your reply of the 26th:

I beg to confirm the sale to you of \$25,000 par value
Edison Storage Battery Co., First Mortgage 6% bonds, for the sum
of \$21,250.00.

As these bonds will be ready for delivery on Monday,
I beg to confirm, also, my telephone message to Mr. Randolph,
asking you to kindly instruct me, by telephone, on Monday morning,
as to the address in New York at which you wish the bonds delivered.

Thanking you for the order, I am,

Very truly yours,



Tel. 6100 John.

*2500
1250
2000
21250*

ESB Co.

F. A. COFFIN,
34 PINE STREET,
NEW YORK.

*Answered
May 23, 1907*

*Answered
May 23, 1907*

NEW YORK, May 21st, 1907.

Mr. Thomas A. Edison,
Orange,
N. J.

My dear Mr. Edison:-

Another of my clients has just informed me that he holds \$25,000 of Edison Storage Battery Co. 6% bonds, which he is disposed to sell.

His idea of price is \$900 per bond, but if you will make me a bid for them, I shall take great pleasure in doing the best I can to meet your views.

Yours very truly,

J. H. Coffin
See reply to your favor of the 21st inst.
My Secretary Mr. Randolph has been
trading in these bonds of I
have referred your letter to him
7 c 2

B. 57.
ESBC
Spoke & Bands.



Rec'd edison
Aug 18 1908

American Surety Company

H. D. Lyman
President

New York

Official letters should be addressed
to the proper department
and on separate sheets, when
possible, giving initials
or number of letter

100 Broadway,

New York

August 17, 1908

H D L

PERSONAL.

My dear Mr. Edison:

For some little time I have been in possession of five shares of the stock of the Edison Storage Battery Company, through a deal with our mutual friend, Charles W. Price.

I do not know whether you are purchasing the stock now, but I thought it best to tender these five shares to you, rather than to any one else, and would inquire whether you ~~would~~ will pay par for them?

With personal regards, I am

Yours sincerely,

To
Thomas A. Edison, Esq.,
Orange, N.J.

Say
Would like to buy best Cornwal just now -
You better had them as we are nearly
ready to bring out the new type
battery
Edison

ES 13 C

Slows to sleep
AV

Say that I shall do all I can to lessen
the noise = am closing the windows next to street
I am trying experiments with the machines
themselves to see if cannot lessen noise
West Orange, N.J.

Thos. A. Edison, Esq. from each = As noise is July 19th, 1909.
Llewellyn Park; Covered through the air think we
West Orange, N.J.; will be able to see it very
My Dear Mr. Edison; much —

was closed
right

I have been advised by one of your head men
to see you personally about a matter of vital interest to all
real estate owners and tenants in the vicinity of the storage
battery factory, but to take as little of your time as possible;
am sending this letter instead.

My brother and I either own or have liens
on property within a block of it, worth over \$80,000.00 and the
owners of other property in the vicinity have asked me, as the one
with the largest interests, to speak for them also, which I wish to
do, knowing that your own sense of fairness will lead you to do
the right thing.

For about six weeks the battery works have
been in operation night and day, and although in the day time the
noise of the tumbling or grinding machinery is not particularly
noticeable or objectionable, as it mingles with other sounds, at
night it is singularly annoying and nerve racking, so much so that
one of our tenants has left the vicinity, another has announced
his intention to leave October 1st, when his lease expires and
another says he simply cannot stand it, lease or no lease.

Mr. Willson
thinks
of right

2 .

You can readily see that this state of affairs will empty all rented premises, and keep new tenants from re-renting, and ruin the neighborhood.

I would like to be able to assure them on your authority, that the night work is only temporary, or else that you will try to see that some way is devised to eliminate the trouble, which I am sure you can bring about if you realize what a serious matter it is for everybody within earshot.

Trusting that you will take it up, and favor me with a reply, I remain,

Yours very truly,

C.R. Browning

B.A.R.

E 3 B 6

H. McK. Twombly,
Mills Building,
New York, March 3rd, 1910.

Aug 3/11/10

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir:-

For the purpose of reporting to the State Controller the value of the property left by the late Mr. H. McK. Twombly and of paying the inheritance tax thereon, will you kindly let me know the values on January 11th, the day of Mr. Twombly's death, as nearly as can be determined, of the following securities:

Edison Storage Battery Co. 6% bonds, of which 100 are held.
" " " stock, of which 625 shares are held.
" Ore Milling Syndicate, of which 25 shares are held.
North American Transportation & Trading Co., of which 525 shares are held.

Your kind compliance with the above request will oblige

Yours truly,

Florence A. V. Twombly,
Executrix.

Per

Any bonds worth about \$5000 on the date of death - stock no longer in the value is prospective to the Co has just started business on the Ore Milling Syndicate was not in existence many years ago - Don't know of any other securities of the Twombly family

Edison

ESB Co.

Ans⁵ 27/1/10

A. I. CLYMER
VAN WEST, CHIEF

May 23, 1910

Mr. Thomas A. Edison,

Menlo Park, N. J.

Dear sir :

MAY 26 1910

May I beg to ask if you will kindly care to include my subscription for a small number of common shares in your new storage-battery company ? I am excusable for feeling complete confidence in every product of your genius. No doubt rests in my mind that you have brought the Edison battery to final perfection and that it will come into world-wide use.

I presume the shares not retained by you will not be offered for general public subscription but will be absorbed by the big men who are fortunate enough to be included among your personal friends. Will you not consent to take me in with you, Mr. Edison, say for one hundred shares common ? It is farthest from my thought to ask you with importunities.

Perhaps you will kindly allow your secretary to inform me as to the name and location of the new company; the number and classes of shares; par value and subscription price:

Mr. Edison, I have felt hope--and without reason, I confess--that you would gratify my wish, and it is needless to say that I await your kindly reply with the most anxious interest. Wont you please do this for me ?

I am

Most respectfully yours,

A. I. Clymer

*Don't let these shares
go. Now and
not later*

ESBG- Equip

OFFICE OF
NORTH AMERICAN RUBBER COMPANY
WASHED CRUDE RUBBER
78 MILK STREET, BOSTON, MASS.

JUN 13 1910

June 10, 1910

Mr. Thos. A. Edison,
Orange, N. J.

Dear Mr. Edison:—

As requested by you, the other day, during our interview regarding storage batteries, I am sending by same mail, samples of our rubber product known as North American Rubber, which we are manufacturing in Boston, and in which you seemed much interested.

These samples were made by the Boston Belting Company, one of our largest manufacturers here in that line, who have been using this rubber for over six months, and find it as satisfactory to them in every way, including wear, tensile strength, elasticity, etc. as the crude rubber they have been purchasing in the years past.

North American rubber is a chemical production in which there is nothing that ever came from a rubber tree, nor is it made from the Guayule shrub, and contains no reclaimed rubber.

We expect to have our new five ton a day plant going before the close of this year, and will be able before the first of July to turn out a ton a day.

These samples are only a few of the very many articles that the Boston Belting Co. are manufacturing out of this artificial rubber, which has stood every test and is pronounced by them equal to any goods they have made out of the crude rubber that comes from the rubber trees. Will you kindly let me know if these samples arrive safely.

I will appreciate it if you will have your representative here send in, for a few days, one of the cells for your storage battery, which I am examining in comparison with other batteries, as I talked with you about.

Yours very truly,

R/T

Arthur Rogers

CSBC - Vanda
WILLIAM H. SHELDERINE
421 CHESTNUT STREET.

Aug 7/23/10

Pilling Cant come says my friend
will have his proxy. You better
see Pilling & decide which
is more agreeable to you that
I have Henry's proxy for my
undelivered shares or stock at
your disposal of the 4th
meeting of the stockholders to be held on
the 27th instant, at 10 o'clock.

While I hope to be present at the meeting
in the event of my not being able to do
so I will much appreciate it if you
will inform me of the plan con-
sidered to be submitted for the accom-
plishment of the object to which you
refer.

Yours truly,
W. H. Sheldene

E 2756 - Bond Meeting

NEW YORK OFFICE, EMPIRE BUILDING
PILLING & CRANE
IRON, STEEL, ORES, COAL, COKE
REAL ESTATE TRUST BUILDING
BROAD & CHESTNUT STREETS
PHILADELPHIA

Pilling & Crane Aug 7/23/10

The meeting is to put my understanding
into some form, either long notes or
July 22, 1910.

Stock & we are getting our sales sheet
rather well organized. we have
about 65000 worth of
Edison Storage Battery Co.,
Orange, New Jersey.

Mr. H. F. Miller, Secretary

Dear Sir :

business on order, sales about
12 to 1500, daily - have \$80000

We have your favor of the 21st instant
notifying us of a meeting of stockholders to be held at
your works on Wednesday of next week.
We shall call on him, think that
in short time our sales will
reach 2500 to 3000 daily -

We regret that we shall not be able to be
present. Mr. Crane has gone to Europe, and the writer
is Secretary of the Eastern Pig Iron Association which
will hold its next meeting on Wednesday, July 27th, at
Port Henry, N. Y., and it is too late now to cancel his
engagement to be present. As Mr. Brown is interested as
a stockholder and will probably be present, we have asked
him to represent us at the meeting. We very much regret
that we cannot be there ourselves.

any information you want
Will you kindly advise us in the meantime
what is the present condition of the company; and if you
have outlined a plan, we should like to know what you
propose to present at the meeting.

I asked Mr. Schenck some time ago which
he would prefer that I take long term
Firm and for the writer. In the absence of Mr. and Mrs.
Crane, their proxies of course cannot be forwarded.
he said he prefers I take stock, please
them and returned to you in time for the meeting.
see him & tell Mr. Brown what you
W.S.P. Yours very truly,

prefer, I would also either to send, have
Pilling & Crane

WILLIAM H. SMELMERDINE,
421 CHESTNUT STREET.

Having kept him at
PHILADELPHIA, July 25th, 1910. 100

rec'd
JUL 26 1910

Mr. Thomas A. Edison,
Orange, N. J.

My dear Mr. Edison:

Your favor of the 23rd instant is
at hand.

In view of the meeting of the
Directors of the Cement Company called for
the 28th instant, the day following the meet-
ing of the Battery Company and my inability
to be away from here on both days, I shall
not come over until Thursday.

I return herein the proxy executed
by me and would say that I favor the issue
of Stock instead of Notes in liquidation of
the indebtedness of the Company to you.

Hoping you are enjoying good health
during this excessive heat, I remain,

Yours sincerely,

W. H. Smelmerdine

ESBC - P. 10-10
NEW YORK OFFICE, CHYRE BUILDING
PILLING & CRANE
IRON, STEEL, ORES, COAL, COKE
REAL ESTATE TRUST BUILDING
BROAD & CHESTNUT STREETS
PHILADELPHIA

July 26, 1910.

Mr. Thomas A. Edison,
Orange, New Jersey.

JUL 27 1910

Dear Mr. Edison :

We have your letter in reference to Storage Battery matters and thank you very much for the information in reference to the battery. We very rarely see Jack Ross; and have never felt quite free in asking him many questions in regard to the battery, not knowing how much liberty you gave your employees in regard to imparting information. We are glad to know that you are progressing favorably, and hope that the business will steadily improve.

In regard to the indebtedness to you, we beg to say that we should prefer to have the Company settle with you by the issue of stock at par, as you suggest. This would enable the Company to become a dividend payer much sooner than if the profits had to be accumulated in order to pay off notes.

Mr. Brown informs us that he expects to be present at your meeting, and has kindly agreed to represent us.

With best wishes, we beg to remain

Yours very truly,

Pilling & Crane

W.S.P.

E 306

~~I would like you to know that~~
~~as a result of the~~
~~after the~~
Mr. Thomas A. Edison,

Menlo Park, N. J.

October 22, 1910

My dear sir : A number of months ago, I wrote you begging to know whether it would not be possible for you to receive ~~as a~~ ^{before we can pay dividends} ~~stockholder~~ ^{in the}

in the storage battery company, and you very kindly replied that the shares then issued had all been taken. ^{business is developing very rapidly and profits must go into increasing the}

of the present increase of capital and I step to ask if you would care to permit me to subscribe for fifty or one hundred shares of the new issue. ^{such circumstances}

I will remit N. Y. funds immediately to the bank named by you. ^{to call on}

I have not the least desire to ^{stock} ~~endorse~~ you, with importunities, Mr. Edison,

but my ambition of years past to be identified with you in the storage

battery proposition will excuse me for writing you again. Will it not

be possible to include me ?

Anxiously awaiting your reply, I remain

P.O.Box 351

Very truly yours,

A. J. Chrysler

Ans 11/2

A. I. CLYMER

Van Wert, Ohio

Your of the 27th inst at hand I thank you for your confidence in the battery and I will let you have 100 shares of my own stock for which I took stock

October 28, 1910

Mr. Thomas A. Edison,
Orange, N. J.

the \$1,000.00 cash for which I took stock at par any time you come and claim it, what we are doing

My dear sir:

Your courteous letter of the 26th instant, in reply to mine of 22d instant, has been received.

I note your secretary says that it will be some time before the Battery Company can pay dividends, as the business is developing rapidly and all earnings must go into machinery and that for that reason you hesitate to sell stock.

This is the only policy, Mr. Edison, that I could have anticipated you would consider: conservation of working capital, mixed with brains, can be depended upon to bring the only battery the adequate success to which it is entitled. I surely think that every dollar of earnings should be devoted to the continual enlargement of the business--to more ground, buildings, machinery and every facility for the most extended introduction and application of the battery--with no thought of dividends for a better of years, if need be. The Edison battery is too big for any but the broadest and most liberal policies.

Mr. Edison, I am a comparatively young man and very far from rich--but there is not one of my carefully considered and pleasantly growing investments that I should not be most happy to

(Mr. Edison, #2)

A. I. CLYMER

Van Wert, Ohio

part with, (if such were necessary,) in exchange for the distinguished privilege and advantage of being identified with you and the battery. This has been my ambition of years, since I first read of your labors along this line, realizing then no less than now, that the perfected storage battery would immortalize you, were all of your other magnificent bequests lost to the world.

Your letter of the 26th instant encourages me to believe that you may care to receive me with you in the Battery Company--for I beg to assure you that the question of early dividends had not for a moment occurred to me--and I most earnestly hope that you will as a mark of your kindness permit me to become a stockholder in your company, say for 50 or 100 shares of \$100 par value, or to whatever extent may be agreeable to you.

Awaiting your reply with the deepest interest,

I remain

Most sincerely yours,

P.O. Box 351

A. I. Clymer

33860-71000 sale

Ans 11/9/10

A. I. CLYMER
VAN WERT, OHIO

November 5, 1910

Mr. Thomas A. Edison,
Orange, N. J.

My dear sir:

Your most kind letter of the 28 inst., postmarked at
Orange Nov. 3, 7-30 p.m.,--reached me to-day. *Carole Keller which*

I cannot find words to express my pleasure at your
having so generously gratified my wish to be identified with you
in the Edison Storage Battery Co. While, in New York, two weeks ago, *to the Edison bank*
I visited your company's booth at the Madison Square Electrical Show,
and your representative, seeing that I evinced some *for the Edison bank*
interest, gave me a most illuminating explanation of the battery
which in itself fascinated me. *stating how you have*

I of course made no inquiry of him as to the *of the Edison bank*
fact that he was not there to discuss the company's financial affairs.
But I felt a very strong impulse to go to Orange in the hope of
meeting you and taking just a minute of your time; however, I restrained
myself, feeling that I should be imposing upon *of the Edison bank*
gentlemen whose time
is worth very much more than mine. I shall indeed take the pleasure
of visiting the factory when I am again in the East, and hope to thank
you personally for your very especial consideration.

A. I. CLYMER
VAN WERT, OHIO

Mr. Thomas A. Edison, \$2

Will you be kind enough, Mr. Edison, to advise me as to
the par value of the stock per share (I presume the shares are of the
usual size of one hundred dollars and that there is one class of stock)
and who the company's transfer agent is or what Orange or New York bank
will deliver the 100-share certificate to me; then I will know where
to remit, and the amount. It will be highly agreeable to me to remit
to you direct, if you prefer; but I have presumed that you do not care
to take the time and trouble to personally see to transfers, etc.
I had thought of sending my remittance to one of your best orange banks,
--when it occurred to me that this might not be agreeable to you.
I shall be ready to remit promptly upon receipt of your advice.

Very sincerely yours,

P.O. Box 351

Arthur I. Clymer

ESBC - stock sale

Ans
Nov. 14 - 1910

A. I. CLYMER
VAN WERT, OHIO

Mr. Thomas A. Edison,
Orange, N. J.

My dear sir :

Your very kind letter of 9th inst. has been received and I have advised that you will deliver to Second National Bank of Orange, N. J., a certificate for 100 shares (par value \$100. per share) of the Electric Storage Battery Co., on receipt by them of N. Y. dft. for \$10,000. (\$10,000.) dollars from me, said certificate being issued to me (Arthur I. Clymer).

I have to-day made remittance of \$8200. to my New York bankers, Messrs. Henry Claws & Co., of 17 Broad Street, placing my balance with them at \$10,000. plus, and have also mailed to Second National Bank of Orange my check on Messrs. Claws & Co. for \$10,000. I have requested them to forward certificate to me here by registered mail, and have attached 12¢ stamps to my letter, for that purpose. Mr. Edison

A. I. CLYMER
VAN WERT, OHIO

Mr. Thomas A. Edison, #2

would you care to ask them if they will kindly collect draft and forward certificate without cost to me, in courtesy to you as their patron ? I believe they would do this for you.

Recently noticing that the Electric Storage Battery Co., of Phila., were expecting to bring out an improved battery, I wrote them an ordinary inquiry. You may be interested to read their reply, which please destroy.

Yours most appreciatively,

P.O. Box 351

Arthur I. Clymer

*The Phila people are
dissatisfied with
this battery
they are
trouble it has all the defects
of the old one
and was introduced
and was
tried out. I gave a go in
the house. They say the
battery is not the Co.
I have not seen the
battery. I have a
copy of it in my
collection.*

[ENCLOSURE]

"Chloride Accumulator"

"Tender Accumulator"

"Exide Accumulator"

THE ELECTRIC STORAGE BATTERY CO.

GENERAL OFFICES

PHILADELPHIA, PA.

**"Exide"
Battery**

CLEVELAND OFFICE, CITIZENS BUILDING

Nov. 5, 1910.

Mr. A. I. Clymer,
Van Wert, Ohio.

Dear Sir:-

Your favor of the 2nd inst., addressed to Philadelphia, has been referred to this office for attention.

We have perfected a new vehicle battery which will be far superior to any battery manufactured up to the present time. Its capacity will be about 20% greater than that of the EXIDE, but its life will be from two to three times greater and it will not be necessary to clean it during its life. These latter points are extremely important and, we believe, will make it very popular.

In regard to mileage, it is impossible to make a definite statement in regard to this but with a proper sized battery of this type in the well designed cars of this date, the radius of mileage will be entirely satisfactory to users of electric.

We are at this time not in position to quote prices on the battery as the prices have not been made up.

We hope to be able to begin deliveries of this type

[ENCLOSURE]

Mr. A. I. Clymer,

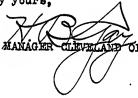
-2-

11-5-10.

of battery early in 1911. In purchasing your car, it will only be necessary for you to notify the manufacturer that you desire our new type of battery.

Very truly yours,

3-1


MANAGER CLEVELAND OFFICE.

(I told them I expected to buy an electric carriage in the spring and wished to know something of their new battery. My letter brought forth this reply.)

C. D. JACKSON & CO.

IMPORTERS OF AND DEALERS IN

MARBLE, STONE, MOSAIC PLACQUETTES & GRANITO

OFFICE, YARD AND WHARF

105TH STREET AND EAST RIVER
NEW YORK

CABLE ADDRESS RECHING, NEW YORK
LIEBER'S CODE ABC 5TH EDITION

TELEPHONE 3727 HARLEM

SOLE REPRESENTATIVES FOR

PASADOCOTT'S
C.F. FR & PS, CARRARA

MARQUETTI'S
A.P. BLANC & MARBLE

DEL MONTE QUARRIES
AFRICAN & INDIAN MARBLE

FIVRE & CO
FRENCH LIMESTONES

CIVET, POMMIER & CO
FRENCH LIMESTONES

PATENT UNIVERSAL MARBLE CEMENT

SOLE REPRESENTATIVES

FOR THE FOLLOWING QUARRIES

GRAND MAINTONVILLE, CH
BARREVILLE (PIERRE DE TOURNAI)

ESCHAILLON, BLANC & FLEUR

TAVERNELLE

ESQUETTE

SWISS GRANUL

SENOU

PIERRE DE LENS

CARR STONE

AND OTHERS.

SUBJECT

By Nov. 18th, 1910.
NOV 19 1910

Mr. T. Brady,
c/o Edison Storage Battery Co.,
West Orange, N. J.

Dear Sir:-

In accordance with request of our Mr. Georges who called upon you yesterday, we are sending you by express, some sample spawls of Carrara ^{Italian} Marble such as we could supply you for your requirements.

We are also communicating with our shippers abroad, requesting them to furnish us with a price on Marble Waste of this character and we shall not fail to quote you a price on same as soon as we hear from our shippers.

Thanking you for your inquiry, we remain

Yours very truly,

C. D. Jackson & Co.

RMF/FW.

ALL AGREEMENTS ARE CONTINGENT UPON, AND SUBJECT TO, STRICKS, ACCIDENTS, DELAY OF CARRIERS, OR OTHER CAUSES BEYOND OUR CONTROL, AND ALL CONTRACTS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

[ATTACHMENT]

85 B. 40 Equip

Brady

Find out what Jackson
& Co my will import

50 tons of the marble
which
they sent a sample

Edison

Analysis of Marble from
C. T. Jackson & Co
New York

12/3/1910

#85

An average sample of the Marble
shows following results:

CaO - 54.28 %

CO₂ - 43.70 "

SiO₂ - 0.32 "

MgO - 0.75 "

FeO - 0.42 "

Al₂O₃ - 0.24 "

H₂O - 0.05 "

99.76 "

J. Goldstein

12/12/10

[ATTACHMENT]

Analysis of Marble from the Astoria Marble Sawing Co. Astoria, O.		12/27/10 #92.
An average sample of the Marble shows following results:		
CaO -	52.80 %	
CO ₂ -	41.97 "	
SiO ₂ -	4.38 "	
MgO -	0.10 "	
FeO -	0.13 "	
Al ₂ O ₃ -	0.54 "	
H ₂ O -	—	
	99.94 %	
J. Goldstein		
12/27/10		

A. I. CLYMER
VAN WERT, OHIO

November 18, 1910

Second National Bank,
Orange, N. J.

Mr. Chas. M. Close, Cashier,

My dear sir : Your letter of 16th inst. is at hand,
with certificate No. 92 for 100 shares in the capital stock
of Edison Storage Battery Co., issued in my name, in payment
for which I previously mailed you my check on Henry Claws & Co.
for \$10,000, to be placed to credit of Mr. Thomas A. Edison.
I have written Mr. Edison, also, acknowledging receipt of stock.

Begging to thank you for your courtesy, I remain

Yours very truly,

Arthur I. Clymer



Henderson
The Baker Electric Vehicle Co.
 MANUFACTURERS OF
ELECTRIC VEHICLES
 1230 W. 12th St. St. Paul, Minn.
 R.C. WHITE, President; J. B. HENDERSON, Secretary.
 J.B. HENDERSON, Sales Manager.
 EDGEMOND, ILL. U.S.A.M.S.R.
 CLEVELAND, OHIO
 November 21, 1910.



Edison Storage Battery Co.

Orange, N. J.

My Dear Mr. Bee:-

Attention Mr. W.C. Bee.

Your two letters of November 18th at hand. I beg to say that I do not believe that a scheme of basing the discount on the number of batteries bought by a manufacturer will work out as to-day every high grade standard article is sold to legitimate manufacturers at the same price regardless of the quantity bought; possibly with but one exception where a manufacturer closes a very large quantity. In this latter case the manufacturer possibly obtains a slightly higher discount than usual.

Referring to the latter sentence in one of your letters about cutting prices, we beg to say that no manufacturer of a high grade article to-day allows his sub-agents to cut prices but I also think that it would be difficult for you to watch this closely as the manufacturer of Electric cars will find a way of excuse by saying that he did cut the price on his car and not on the batteries. This is done to-day to our absolute knowledge by one manufacturer, whose name I do not care to quote, in Chicago and driven to such an extent that he has sold several cars with Edison batteries at the price of the car with lead batteries.

I thank you for your congratulations and beg to say that the record was made with 40 cells. Referring to the 44 cells which you kindly did let me have, I beg to say that the average ampere hour capacity of this battery was 270 ampere hours with the exception of 5 cells which would not show up as good and I, of course, left out the 4 worst cells.

I am glad to learn that you will soon be in shape to make prompt deliveries on your batteries as we are certainly to-day in a very bad shape and have to accept cancellations on cars to be equipped with Edison batteries for the reason that we cannot obtain the batteries from you in time. I am surprised that you charge this delay partly against our special trays as I do not think it would be asking too much from this Company if you were to keep several sets of trays in stock.

Referring again to the undelighted point of the cells shifting in the trays, I beg to say that it is unjust if this is charged by your Company to our special trays as I have experienced the same trouble with your late standard trays as well in this factory as on some batteries in outsiders' cars and for your interest I beg you once more to take my word for it that this trouble will not be eliminated before you will provide on your own an emboss which will have the proper shape and which will be large enough to allow for the experienced distortion of the metal around the embosses after the connectors have been attached and detached several times. I also beg to say again that the present conical shape of the emboss tends to slip out of the hard rubber button with the slightest effort.

To prove to you once more that my statements are correct, I beg to call your

The B. M. V. Co.

Sheet No. 2

E. S. S. Co.,

attention to the fact that in the 44 cell set of battery which you sent me the most faulty cells as far as shifting is concerned were those in the small stiff two cell trays.

Hoping to hear from you that something has been done on this mentioned situation, I remain,

Yours very truly,

Chas. Greenfield
c/s P.S. I expect to be in
N.Y. Monday next, to sail for
Europe on Tuesday. Should like very much
to see you in N.Y.

EDISON STORAGE BATTERY COMPANY
SUITE 424
McCORMICK BLDG. 189 MICHIGAN AVE.
CHICAGO

November 26, 1910.

Wm. G. Bee, Manager of Sales,
Edison Storage Battery Co.,
Orange, New Jersey.

Dear Sir:

Supplementing my letter of even date, in regard to the proposed announcement in the press, I today met Mr. Anderson at his Chicago Branch, and he suggested bringing in the name of the Detroit Electric in connection with the Anderson Carriage Company, reading as follows:

Anderson Carriage Company, Manufacturers Detroit Electric.

Also, it occurred to me that we should mention the users of the Edison battery in commercial vehicles, namely,

Laneden Company,
Automobile Maintenance & Mfg. Co.
Anderson Carriage Company.

If you wish to include the General Vehicle, you, of course, know best.

I have arranged a meeting Monday. There will be present representatives of the Commonwealth-Edison Company, the Automobile Maintenance & Mfg. Co., Mr. Price and Mr. Anderson, of the Anderson Carriage Company, and Mr. Klingelsmith of the Laneden Company, and possibly a representative of the Retail Drygoods Association.

Yours very truly,

CBF-L

W. G. Bee
File this
under Battery
Accounting

The New Edison Storage Battery

WARNING!

The Public is hereby warned against certain manufacturers of ELECTRIC VEHICLES, who, solely to obtain a greater profit from their vehicles, use a cheap lead battery, giving but half the mileage and one tenth the life of the above.

Use of the lead battery reduces the total cost of a vehicle, but is PRICE the only thing to be considered in making so important an investment?

For the above reason no hesitation has been shown in making all kinds of misstatements regarding THE NEW EDISON STORAGE BATTERY.

Mr. Edison certainly would not spend seven years obtaining a battery to solve the problem of vehicle traction in cities, were he not thoroughly convinced the results could never be obtained by the use of a lead battery.

The great stores of New York City, after using lead batteries for many years and EDISON BATTERIES for but three years, are discarding the lead, and using the higher priced EDISON BATTERY. WHY?

BECAUSE IT IS RELIABLE

As the manager of one of the large department stores said,

"It is more important to have a reliable delivery department than to save the difference of a few hundred dollars between the First Cost of an EDISON and a LEAD battery".

The following firms are now selling and advertising cars regularly equipped with the NEW EDISON STORAGE BATTERY.

ANDERSON CARRIAGE CO.
S.P. BAILEY CO Inc.
BAKER MOTOR VEHICLE CO.
THE WATKINLEY CO.

DETROIT, MICH
AMESBURY, MASS
CLEVELAND, OHIO
INDIANAPOLIS, IND.

Information regarding this battery will be gladly furnished upon application to

Edison Storage Battery Co., 121 Lakeside Ave., Orange, N. J.

424 No. 1st St. Chicago

ESBC-4-10-12-10

A. I. CLYMER
VAN WERT, OHIO

Mr. Thomas A. Edison,
Orange, N. J.

*Harry writes letter
about the Edison
battery, 10/10/12, E*

My dear sir : Referring to my recent purchase from you of 100 shares Edison Storage Battery Co. at par. As a gentleman of large interests and important connections, you cannot but have noted my very exceptional confidence, in proposing to buy property without having made any inquiries whatever of you, as to the business. In your letter of 9th inst., you said, "I thank you for your interest and confidence in the storage battery." Allow me to say, Mr. Edison, that my confidence in the battery has been due not alone to its obvious value as an invention but to my feeling that both battery and shares are invested with your own personality as a genius and a gentleman. I did not question the price of the shares, and the amount of money I have invested in them is proportionately very large for a man of my limited means; this, I think, may tend to increase your kindly interest in me as a holder of your stock. In this single

Mr. Edison, #2

A. I. CLYMER
VAN WERT, OHIO

instance, I felt it unnecessary to my protection that I first inform myself fully as to the corporate, financial and business condition of the investment in question, and I am pleased to assure you that this has been due solely to the fact that it is your invention and your controlling interest in the company, that have induced my absolute confidence. I have considered it to be an organization in which a gifted man and a group of his friends have formed an ideal combination of brains, character and capital.

And now that I have fully explained the reason for my complete faith and desire to invest in the battery shares, I trust that you will care to give me--in absolute confidence if you so condition--some information as to the company and its business. I should be interested to know, if you will obligingly inform me, as to --

The date of incorporation,
No. shares authorized,
No. shares originally issued,
Additional issues, with dates,
At what price the present new shares are taken by the stockholders

Mr. Edison, #3

A. J. CLYMER
Van Wert, Ohio

and what proportion of these shares are retained by the company as treasury stock,
Do my shares entitle me to an interest in the latest issue, and when do the transfer books close against the allotment of the new stock ?

May I ask if the company has any bonded indebtedness, and if so, the amount, interest rate and maturities ?

Would you care to enclose to me, Mr. Edison--for immediate return if so desired--a copy of the company's latest statement of condition, such as are sent to stockholders of the Eastman Kodak Co., for instance ?

I should be much interested to know whether the New York City crosstown lines have ordered more Edison battery cars, in addition to the trial car, and if it be true (as I have read) that a large contract has been made with an Alaskan transportation company.

It will gratify me greatly to read whatever information you will privately afford me, and awaiting your kind reply with very much interest, I beg to remain

Sincerely yours,

A. J. Clymer

A. I. CLYMER
VAN WERT, OHIO

December 10, 1900

Edison Storage Battery Company,
Orange, N. J.

Mr. H. F. Miller, Secretary and Treasurer,

Dear sir :

Your letter of the 1st inst. relative to the Edison Storage Battery Co., replying to mine of 29th ult. to Mr. Edison, was received in my absence.

I believe I do not fully understand the situation: you state that the original authorized capital of \$1,000,000 was fully issued; that the capital was recently increased by \$2,500,000, making the total capital \$3,500,000; that \$1,000,000 of stock was given to Mr. Edison for his patents--those existing and all future patents; and also that about \$2,000,000 of the recent increase was issued to Mr. Edison at par, for money advanced by him to the company. (In his letter of 2d ult., he informed me that he paid into the Edison Storage Battery Co.

Harvey
He has all about it
He has seen the letter
du
12/7/10

E. S. B. Co. 2

A. I. CLYMER
VAN WERT, OHIO

\$1,900,000 cash, for which he took stock at par.) May I ask you to kindly advise me how the \$1,900,000 which he paid into the company is invested; is it in lands, buildings and machinery? I had not supposed that so large an amount was invested in the plant. I should be pleased to know what amounts, respectively, are invested in ground, in buildings and in machinery. Doubtless you can obtain this from entries in your present books.

May I inquire to what use the proceeds of the \$500,000 bond issue have been put? This, I understand, makes a total investment of \$2,400,000 or \$2,500,000. I will also ask what is the interest rate on the bonds and when they mature.

Referring to the \$1,000,000 of stock given to Mr. Edison for his patents now existing and all future patents: as I right in understanding that this includes all patents now or in future issued in connection with the Edison storage battery in this and foreign countries?

I enclose herewith, for your interest, two recent adver-

E. S. B. Co. 3

A. I. CLYMER
VAN WERT, OHIO

tisements of the Woods Motor Vehicle Co., from the Chicago Record-Herald. This company's attitude seems quite unfair and unbusiness-like and evidently is calculated to discourage electric-carriage buyers, as far as possible, from specifying the Edison battery. I cannot understand their animus, unless they have a private arrangement with the Exide people or own an interest in the Electric Storage Battery Co.

You understand that I have requested particulars relative to the company, for my private enlightenment as a stockholder interested in his investment and in the success of the company. It is only such information as one ordinarily would desire before rather than after making the investment. Your trouble in fully advising me is much appreciated.

Very truly yours,

P-O Box 351



THOMAS A. EDISON
President

FRANK L. DYER
Vice-President and General Counsel

E. G. DODGE
General Manager

H. F. MILLER
Secretary-Treasurer

EDISON STORAGE BATTERY CO.

Telephone, 908 Orange

ORANGE, NEW JERSEY Dec. 16th 10.

A. I. Clymer, Esq.,

Van Wert, Ohio.

Dear Sir:

Replying to your letter of the 10th instant I beg to reply that the \$1,900,000. cash was paid in by Mr. Edison over a period of ten years, and it was used for machinery which was specially designed and made; and which became in time, obsolete, owing to improvements in methods of manufacture and had to be scrapped. In fact, approximately the whole amount was used in perfecting the battery and in experimenting, to bring the manufacturing processes up to a commercial stage, which was accomplished a year ago last July, when we began shipping the improved cell.

Thousand of experiments were made as well as exhaustive tests before Mr. Edison was satisfied with the battery, all of which takes money which Mr. Edison, sanguine of the ultimate success of the battery, willingly advanced the Company. This experimental account will, in time, be wiped out by profits.

The real estate, buildings and machinery owned by the Company are collateral for the \$500,000. bonds held. The bonds bear interest at six percent and mature in 1917.

Mr. Edison agreed to assign to the Company, all patents issued or to be issued on storage batteries for the use of the Company in the United States only.

Yours very truly,

H. G. Miller
Treasurer.

Ed - Hand
Amd 12/27/10

A. I. CLYMER
VAN WERT, OHIO

Edison Storage Battery Co.,
Orange, N. J.
Mr. R. F. Miller, Secty.-Treas.,

My dear sir:

interest.

I have no means of giving you any further information regarding the electric car merger, but thought to hurry the hint of it to you. The Wagon Works is large, old-established, I believe accustomed to doing things in a big way, but I don't know who or where the Ohio Electric Car Co. are.

I wish the Anderson and Baker Co.'s could do justice to themselves and you in Chicago - the second largest city in the country. Enclosed ads show the competitive interest taken by them and by the Woods Co. in the very important, level country reached by the Chicago dailies. The Detroit and Wood ads appeared in the Record-Herald of yesterday. The full-page ad, demonstrating the value of advertising in the Sunday Record-Herald, incidentally booms the Woods electric.

A. I. CLYMER
VAN WERT, OHIO

Edison Storage Battery Co. 2

As it happens, your ad appears on the page opposite the full-page ad. I think it is an extremely attractive and convincing advt., with its two display lines and the maps. Having had a very considerable and successful experience in advg., I am in position to appreciate your announcements. Will you pardon me if I suggest that it might be desirable, (having interested the reader in your battery) to invite him to send for your new illustrated booklet, fully describing the battery, its unique features, advantages, and remarkable accomplishments to date. This will put you in possession of the name of a "prospect," which you can at once mail to each of the companies equipping with the Edison.

I wish to do everything in my power to further the interests of the company, and then when I am ready to buy a car, perhaps you will care to provide me with an Edison battery at an inside price, very privately.

I am not informed as to the desirability of the Motz puncture-proof tires, advertised on same sheet as your ad, but the idea of a trouble-proof tire for electric use (with ladies especially) strikes me very forcibly. It removes an important source of doubt from the minds of a large contingent of possible buyers.

Hoping to hear from you in reply, I am

Yours very truly,

A. I. Clymer

say that we are only
just coming out even on battery
as we give 20% off + 2 1/2% for
cash, soon we will be giving
costs - we kind to stop advertising

I enclose several ^{paid} ^{to you} ^{for} ^{your} ^{plans}

a little ^{to} ^{you} ^{for} ^{your} ^{plans}
I don't know
Milburn Wagon Works, 1000
Chicago, Ill.

Woods has a special
contract with Ende
is very numerous

**Edison Storage Battery Company Records
Correspondence (1911-1920)**

This folder contains documents, primarily correspondence, relating to the business of ESBCo. Included are letters pertaining to the outfit and supply of the ESBCo works, corporate finance, and the production and sale of batteries and by-products. Correspondents include Edison, Charles Edison, Robert A. Bachman, Donald M. Bliss, Miller Reese Hutchison, Stephen B. Mambert, Arthur Mudd, C. E. Sholes, and other ESBCo employees; investors Arthur I. Clymer, and William D. Sloane; and Frederick A. Hall, an efficiency engineer associated with Frank B. Gilbreth. Some of the items deal with supplies available from the Sangamo Electric Co., the Troy Electric Co., and the Quigley Furnace & Foundry Co. Other documents relate to the foreign sales of Edison storage batteries; the specifications for batteries required by the U.S. Navy; a sales company called the Transportation Engineering Corp., organized by one-time ESBCo employee, H. G. Thompson; and the development of an automotive starter by the Tidewater Equipment Co. Also included are memoranda and conference minutes summarizing the staffing and structure of the Engineering Department, Research Department, and Tube Inspection and Assembly Department; and an insurance report from 1918 providing the layout of the ESBCo manufacturing plant in West Orange.

Less than 10 percent of the documents have been selected. The items not selected include routine exchanges regarding the supply of equipment and material for ESBCo, the payment or deferral of accounts, and other matters of daily administration. Also not selected are letters of transmittal and acknowledgment and items that duplicate information in selected material.

83 B 6 -
Employers

The Chase National Bank

A. Barton Hepburn, ^{President}
Albert H. Wiggin, ^{First Vice President}
Samuel H. Miller, ^{Cashier}
Henry M. Conkey, ^{Assistant Cashier}

New York Jan. 14, 1911.

Thomas A. Edison, Esq.,
West Orange,
New Jersey.

Dear Sir:

One of our clients has made inquiry of us concerning Mr. A. J. Doty, who, we understand, is connected with the Edison Storage Battery Company. We are advised that Mr. Doty is well known to you.

We should esteem it a courtesy if you would favor us with your estimate of Mr. Doty's character and responsibility. From your knowledge of his financial worth, would you consider an individual contract with Mr. Doty of \$15,000. to \$20,000. as good?

Thanking you in advance for your courtesy in the matter, and requesting that you treat this inquiry as entirely confidential, we remain

Yours very truly,

McCarthy
Cashier

Jan 16 1911
Ans 1/17/11

I will answer

Mr. Doty is employed by the E S Batts
as an Engineer installing
Batteries, I am not familiar with
his financial condition, He is
in my opinion, a reliable man
Edison

The Chase National Bank

A. Burton Hophorn,
CHAIRMAN OF THE BOARD
Albert H. Wiggin,
PRESIDENT
Samuel H. Miller,
VICE PRESIDENT
Henry M. Conkey,
CASHIER

New York Jan. 20, 1911.

JAN 21 1911

Thomas A. Nelson, Esq.,
Orange,
New Jersey.

Dear Sir:

Please accept thanks for your favor of the 17th instant, in response to our recent inquiry. We appreciate your courtesy in this matter.

Yours sincerely,

W. B. B. B.
CASHIER

Ans. 1/30/11. 2586.

Jan'y 26/11

2 WEST FIFTY-SECOND STREET

Thos A Edison Esq
Dear Mr Edison

As owner of 100000
of the 640 Bonds and
625 Shares of the Capital
Stock of the Edison
Storage Battery Co I am
naturally desirous of
knowing something
about the condition of
the Co at this time

The last information
recd was contained in

a letter from H. D. Miller,
Treasr. dated Aug. 17/09
advising the success of
the Battery, and of its
great prospects.

I shall be much
obliged if you will send
me a statement of the
Co's condition - or at least
give me some idea of
what has been done
towards getting the Comp
into that shape you pre-
dicted for it some years
ago. Yours truly
H. D. Miller

[ATTACHMENT]

Wm. D. Hoane

Dear Sir

A firm of public accountants
are now engaged in making
~~Complete~~ an audit &
we should have in
shortly & will send
you the results -
We ~~are~~ have established
a very good business
maintaining at present

2
to about \$60,000..
we employ 600 men -
per month, & it is growing

On account of great
expenses of advertising
& establishing ourselves
there are no profits but
~~we~~ This preliminary
expense will ~~not~~
decrease from now on
& we will surely show
good Earning before
face -

Σ

C-BC

EDISON STORAGE BATTERY COMPANY
SUITE 424
McCORMICK BLDG. 193 MICHIGAN AVE.
CHICAGO

February 4, 1911.

Mr. Thomas A. Edison,
Orange, New Jersey.

WJ

FEB 6- 1911

My dear Mr. Edison:

The Chicago Automobile Show is the best they have ever had. The weather is the finest I have ever found it in Chicago at this time of the year. The crowd is something fierce. The electrical people are doing the biggest business they have been doing for a year.

Anderson is showing five models, all equipped with Edison batteries. As near as I can make out, his sales at the present time are about half lead and half Edison. I know they are selling them because I have seen the contract signed. Anderson is doing the biggest business of any of the pleasure car manufacturers. They shipped from their factory in the month of December eighty-three cars.

Waverly is showing one car with Edison Battery.

Ohio is showing Edison cells in trays.

Babcock is showing one model with Edison batteries.

Baker has got cold feet again, but this happens to be only in Chicago. The facts of the case are as follows: Temple, a Jew, who is their biggest agent, and by the way a hustler, buys cars without batteries, and assembles his own lead battery here. He uses what they call a "Universal", made here in Chicago, and much cheaper I understand than the Exide. He says that he is entitled to manufacturers' discount on Edison Batteries. He is going to sell from fifty to seventy-five Baker rigs this season. He will push Edison Batteries if we give him the discount. I say he is not entitled to it. Ten per cent is all he should get. The Baker people

TAE -2-

don't want us to give him the full discount, and if we did, we would only make them sore. In the way I size it up, the public is going to demand Edison Batteries, and Temple will have to put them in anyway. He has a Baker car equipped with Edison Batteries, and is getting excellent results.

Woods and R. & L. are fighting us hammer and nail.

The "Ironclad" is now being put off for first of March delivery. They had promised it for first of January, but have not made good. They got out a guarantee of 80,000 miles over a period of three years, and if the 30,000 miles are run in a year or two years, that ends it. If the battery runs three years without doing the 30,000 miles, that ends it. But, mind you, they have not delivered any of the batteries yet.

I spent last evening with Gruenfeldt, the engineer of the Baker Company. He is our friend, and I honestly believe we will win out through him.

But the real live wire of the whole bunch is Anderson.

Yours very respectfully,

WGB-L



A. I. CLYMER
VAN WERT, OHIO

February 1, 1911

Edison Storage Battery Company,
Orange, N. J.

Mr. Thomas A. Edison, Pres.,

My dear sir :

Desiring to keep you informed of

anything I hear affecting the sale and success of the Edison battery, I wish to mention something that has come out in my correspondence with manufacturers of electric cars, toward securing a bargain in an up-to-date car.

The Baker Motor Vehicle Co. write me that "it is only recently that manufacturers have been getting out bodies which will take the Edison battery and we do not think you could find a car second-hand. There is a new battery brought out by the Electric Storage Battery Co. called the Iron-Clad, which has almost stopped the sale of the Edison, and of course any of our cars would take this Iron-Clad battery."

They say nothing further in this connection, as to the comparative desirability and price of the two batteries, but it gives one the impression that something is being done to the disadvantage of the Edison. Perhaps the Electric storage Battery Co. are trying to coax the Baker Co. away with special inducements. However it may be, I should

*Rec please tell me
about Watz
I can answer Clymer
Return letter
(note Baker reply)*

A. I. CLYMER
VAN WERT, OHIO

Mr. Edison, #2

greatly regret to see our company lose perhaps the most prominent electric car mfg. company.

Without any reference to the comparative merits of the Edison and Exide products, it is evident that this is no ordinary business competition--it is a battle for first place.

I should be interested to know the comparative prices charged for the Edison, the Exide and the Iron-Clad batteries, (their equivalent of 40 cells Edison A-6.) if you will kindly inform me. I believe the car builders balk at the extra charge of the Edison S. E. Co., thinking it discourages prospects from buying their cars -- probably they think buyers will make no allowance for the extraordinary life of the Edison ^{conclude} ~~think~~ that it has not had time to demonstrate its value in that respect. Perhaps the decreased cost which you stated, in a former letter, that you were expecting to reach, will enable you to meet competitors on a cheaper basis.

I wanted very much to get a "used" or "demonstration" car, 1910 or 1911 model, shaft-driven, Motz cushion tires, with hoods of proper capacity to accommodate Edison batteries. Will you be kind enough, Mr. Edison, to inform me (very privately if desired,) whether you personally favor shaft- or double-chain-drive? We have brick-paved streets and fairly well macadamized country roads. Perfectly level country. I should think that a completely enclosed chain-drive would be especially desirable--but in the absence of that, one must choose between shaft- and exposed chain-drive.

A. I. CLYMER
VAN WERT, OHIO

Mr. Edison, #9

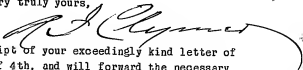
Has it been definitely ascertained that the shaft-drive consumes the current materially faster than the chain-drive, on such roads as I have just described ?

And may I beg to ask whether you or your friends have had any experience with the Motz cushion tires ? I have deferred buying any kind of a car for several years, as I am neither mechanical nor "husky," and have been held back through dread of the inevitable tire troubles. I quote, confidentially, from a letter just received from Anderson Electric Car Co.: "The Motz tire proposition we are not very much in favor of. We do not believe it will relieve you of all the troubles. While you might avoid punctures, you would have other troubles which our (Cleveland) agent would explain."

This may be really true; or, it may be that the Anderson and Motz people have disagreed, as the Motz ad. in to-day's Chicago Record-Herald omits the name of Anderson from an impressively long list of car builders who include Motz tires in their equipment.

I have not as yet received your reply to mine of 4th inst., but trust it is on the way.

Very truly yours,



P.S.: I am this moment in receipt of your exceedingly kind letter of 10th inst., replying to mine of 4th, and will forward the necessary details as to our current, as soon as I shall have determined on make and type of car.

A.I.C.

[ATTACHMENT]

I willing
 One
 Feb 8-1911
 G. M. M.

Moly tire is used instead of a
 Solid - it takes more current than
 solid tire, it don't skid as
 much. Mr Bee our selling
 apt says its spoken of
 favorably

In level city would say
 Shaft drive but for
 very hilly Country
 should say Chain drive
 Baker or Andersen are
 good Cars -

The Iron clad Lead battery
 is hanging fire, They are
 having trouble with it
 of course its got out especially
 to fight us but we shall
 win in the end - 2

Spaced chains are a better
 than covered chains - spaced exactly as they are

ESAC - 5722

THE INVESTORS' AGENCY, INC.
ESTABLISHED 1915
NATIONAL CITY BANK BUILDING
88 WALL STREET NEW YORK TEL. 3405 8000

M. L. SCUDDER, PRESIDENT
HARVEY SCUDDER, SEC. AND TREAS.

SCOPE
INVESTIGATIONS, AUDITS
EXAMINATIONS FOR BANKERS
VALUATIONS OF CORPORATIONS
NATIONAL STOCK AND BOND
SERVICES OF SERVICE SECURITIES
LEGAL ACCOUNTING
PERSONAL SERVICES
PROFESSIONAL SERVICE INVESTORS
STATISTICAL LIBRARY 1885-1910

Edison Storage Battery Co.
Valley Road,
West Orange, N. J.

Gentlemen:-

We are appraising the above securities in connection with the
Tax Proceedings for the Comptroller of the State of New York.
Will you kindly let us know the fair market value
of the above securities on January 11th, 1910?

Will you also state what were the prices of any
sales or bids made about that date?

These securities are in the Estate of Hamilton McK.
Twombly.

We would be pleased to receive for the files of
our Library any printed documents that you may have concerning
the above company.

Thanking you for the courtesy of an early reply, I
am,

MS/H.

Respectfully yours,

Harry Scudder

Aug 2/18/11
ES Battery Co. is just getting the count on and I hope not yet 500 shares. Paying as those have been made. Some day you will give the price of the stock but its value now is on its prospectus, 10 to 20. per share

Write 6/14/11
ESB Co.

1990
E. D. MURPHY,
DEALER IN
INACTIVE SECURITIES,
81 WALL STREET, NEW YORK.
TELEPHONE, 7383 HANOVER.

MEMORANDUM

Dear Sir:

I offer subject to previous sale:-

JUN 5- 1911

\$10,000. Edison Storage Battery Co. 6s 1916

Bid wanted.

Will sell any part.

Very truly yours,

E. D. MURPHY.

Dupl =
Here is a good
change to get a good
bond if you find
want any probably
\$85. will take them
Σ

file

ESBG- stock

ROOM
TELEPHONE 5100 HAYES
BRIEF

A. H. DE WITT
BONDS AND INVESTMENT SECURITIES
20 BROAD STREET

Ans 6/20/11



New York, June 14th. 1911.

The Edison Storage Battery Co.
Orange, N. J.

Dear Sirs;

I have had an inquiry for some stock of your
Company and would be pleased to know if you have any to offer and the price.

Will you also kindly send me a prospectus or a
copy of the last statement issued.

Yours very truly

Say

A. H. De Witt.

*The Company have some shares
in the treasury but will not
sell for less than par*

See E

ESS. Co

2105
TELEPHONE 2105
2105
2105

A. H. DE WITT
BONDS AND INVESTMENT SECURITIES
20 BROAD STREET

Ans 6/27/11

The Co has only recently started up
and has paid no dividends as yet probably
will not do so for some time
profits will be used for extending the business

MAILED 20th. 1911.
NEW YORK

The Edison Storage Battery Company
Orange, N. J.

Dear Sir:

is principally owned by NEW YORK Edison

Referring to your letter of June 21st. by

Mr. H. F. Miller. I have a customer who is inclined to buy some of the
stock of your Company but before doing so wishes some information in regard
to the business. Can you send me a prospectus of the Company and a copy of
the last financial statement. I would also like to know what dividends the
Company has paid in the past and what the present rate is.

Am sorry to trouble you for this information
but have been unable to find it in the financial reports.

Kindly let me know how many shares you can
offer at par and what commissions I may expect if I dispose of the same.

Yours very truly

A. H. De Witt

Bus-Wagon

Ans 7/11/11

Edison Storage Battery Company,

Orange, N. J.

Mr. H. F. Miller, Secty.-Treas.,

Dear sir : I note in a recent number of the "Chronicle" that the site for two new factories has been selected, for the manufacture of "storage battery cars for railroad service, and storage battery automobiles."

Will you be kind enough to advise me if I am right in understanding that these two factories will be built and operated by a part of the Edison Storage Battery Co. ?

I understand that there is already a factory where the Edison Beach storage-battery street-cars are built: what is the nature of the cars to be built "for railroad service,"--will they be larger and heavier than the Edison-Beach cars and for use singly and in trains for more extended use, replacing steam railroad trains ?

How soon do you expect to be able to supply the new Edison storage battery automobiles ? Awaiting your kind reply for as much information as possible, I am
P.O.Box 351

Yours very truly,

[Signature]



July 7, 1911

Say the factory is owned by the Leamond Co. At least I think it is. I think the cars will only be made by the Edison Storage Battery Co. 750 cars in 1911. I am waiting for the Edison Storage Battery Co. to start making them. I do not know if they will be made in the Edison factory or not.

What I wish is the wholesale price, to you, of the rectifier with the mercury appliance as stated.

ESBC

Ans 9/16

A. I. CLYMER
VAN WERT, OHIO

Sept. 11, 1911

Edison Storage Battery Co.,
Orange, N. Y.

Mr. H. E. Miller, Secy-Treas.,

Dear sir : I recently wrote Mr. Bee, Manager of Sales, regarding battery, appliances, getting General Electric Co.'s wholesale quotation on rectifier (voltage 110, cycles 60, phase of alt. current, single), as per a letter which Mr. Edison requested Mr. Bee to write me last Febry. I have not heard from Mr. Bee since, altho he may not have had sufficient time to get G. E. Co.'s reply and advise me.

Will you very kindly request Mr. Bee to advise the Gen'l Electric Co. that in addition to the above information (voltage, etc.,) the rectifier is desired at a place where the current in temporarily turned off in the course of the night, when shifting from one engine to another, this resulting in discontinuing the action of the rectifier and it does not resume its work. I understand the G. E. has a mercury attachment for rectifier covering just this condition--by its use, the rectifier resumes its work when the current is resumed at the light and power plant, and the rectifier automatically discontinues when the batteries are fully charged. I am sure you will understand the situation perfectly, and hoping to hear from you by early mail, I remain

Yours very truly,

A. I. Clymer

[ATTACHMENT]

M.G. Bee

Please let me know
what to say to Mr. Clymer

H. F. M.

40 amp rect

460-0005070 + 250

710 B Schenck

[ATTACHMENT]

Sept. 14, 1911.

Mr. Harry Miller,

Dear Sir:-

Referring to attached letter from Mr. Clymer, we are advising Mr. Clymer today in detail, in reference to the Edison battery he proposes to purchase, together with Mercury Arc Rectifier, and have noted the contents of his letter to you, Sept. 11th.

E. J. Bess, Jr.



EJR/AL

BATTERY
ES. B CO.

Dec. 8th, 1911

MR. H. T. LERNING:-

Is there any way in which we can expedite the passage of Storage Battery orders for work done by the Laboratory?

George Meister complains that the Laboratory pay roll is frequently held up because he is unable to properly distribute charges on work done for us, for the reason that our formal orders do not reach him in time to give him the necessary information. The situation is this:

Frequently we have work done in a hurry, and on Mr. Bachman's verbal instructions to the Laboratory, which instructions are later confirmed by formal order. You will readily see if, for instance, such work be begun on Saturday on a verbal order given on Friday and formal order does not reach the Laboratory before Tuesday, Meister would be at sea, at least so far as the Storage Battery distribution of the charge is concerned, since the Laboratory pay roll closes on that date.

I am sending copy of this memorandum to Mr. Bachman, and will do everything possible to accelerate storekeeper's requisition at this end, and hope you will find it possible to do something at your end to improve the condition.

T. J. LEONARD
T. J. LEONARD

TJL/AL

Copies to Messrs. Bachman & Meister.

Noted same

Harry
Dec 7/11
How about the Report
The Edison Co

Dear Mr Edison

Early in the year
you wrote me that the
accounts of the Edison
Storage Battery Co. were
then being audited and
as soon as completed you
would send me the
results. Up to this date
I am without any in-
formation, and hope you
will be good enough to
advise me how the Co.
has prospered this year

and what are the prospects
for the future. I had ex-
pected from your letter that
by this time we might
have looked for a dividend
on the Stock. I am
actually in the dark as to
the condition of the Company
and would like very much to
be enlightened. I hold as
you know \$10000. of the
Bonds and 625 Shares of
Stock therefore much
interested.

Sincerely yours
H. D. Stone

[ATTACHMENT]

Battery - CS & Co

Harry

Write Sloane saying
that we are slowly building
up our business against the opposition
of all the land holding cos & that
our year ends Feb 28. We will be
in a position to give him some
data by March

How about accepting

Sloane's

to take that
everything goes to the
the Co is going to be slightly
profitable concern
When does our year
End

End

Feb 28 - 1/912

Answered
Jan 4 - 1/912
BPM

Battery ES Co.

NEWMAN, NORTHROP, LEVINSON & BECKER

ATTORNEYS & COUNSELORS

JACOB NEWMAN
SALMON D. LEVINSON
BENJAMIN K. BECKER
CHESTER E. CLEVELAND
HARRY GOODMAN
ARTHUR B. SCHAPPIER

CHAMBER OF COMMERCE BUILDING

CABLE ADDRESS "NEWLEBEC"

CHICAGO, Dec. 29, 1911

Jan 18/12
Thomas A. Edison, Pres.
Edison Storage Battery Co.
West Orange, N.J.

Harry
Wentworth
noticed
JAN

Dear Sir:-

Although I have been the owner and holder of
Certificate #75 for ten shares of the Edison Storage Battery
Co. since the organization of the Company, my certificate being
dated Feb'y. 6th, 1905, I have never received a statement of the
Company or a notice of stockholders' meetings.

Will you please cause a statement of the
Company to be furnished me, and give me such further informa-
tion as I am entitled to as a stockholder.

Very truly yours,

Arthur B. Schappier

BVB-MD

Copy notice was mailed to Mr. Edison
all stockholders
our next report will be
ready about 3 weeks after
Feb'y 28 1912 from which he can
get full information
Notice was mailed
to all stockholders
HBM

B.S.
E.S. Co

THE PENNSYLVANIA STATE COLLEGE
DEPARTMENT OF MECHANICAL ENGINEERING

STATE COLLEGE, PA.

January 11, 1912.

Mr. Thomas A. Edison,
Orangetown, N. J.

JAN 12 1912
(11/16)

Dear Sir:-

I am advised that the Electric Omnibus Corporation of New York City has sole rights for the use of the Edison Storage Battery for all traffic by omnibus. Will you please advise me if this is correct?

Mr. C. J. Field of that corporation owes the writer several hundred dollars. Before taking the next step to force a settlement, I would like to hear from you.

Yours very truly,

Arthur J. Wood

Asso. Professor Railway Mechanical Eng.

AJW/M

Mr C J Field, has no rights or
contracts with myself or
the E S Bat Co -
Edison

ESBC

A. I. CLYMER
VAN WERT, OHIO

January 17, 1912

Edison Storage Battery Company,
Orange, N. J.

Mr. H. F. Miller, Secretary-Treasurer,

Dear sir:

*When is our yearly out
when get thing & will make
what to say or better -
Ans 1/13*

I believe it has been upwards of nine months since I have written you inquiring as to the business of the company, and I am pleased to observe that information from various sources indicates a worldwide interest in the battery and a greatly enlarged extent of use.

I should be glad to learn what the company's present capacity is, and what unfilled orders you now have? I presume the \$500,000 of treasury stock remains intact?

In your letter of Dec. 1, 1910, you stated that you were having an up-to-date system of book-keeping installed by a New York firm of accountants and that when that were finished you would be able to furnish a comprehensive statement of the condition of the company: I do not remember what your fiscal year is, but would be very glad if you would send me a copy of your statements issued since the book-keeping system referred to was put into effect. If Mr. Edison would prefer that it be kept quite confidential, it might be sent registered and I would return it promptly if desired.

I should also be greatly interested to know, in absolute confidence if wished, why the company has made a contract with the Anderson Electric Car Co. excluding all other electric car

A. J. CLYMER
VAN WERT, OHIO

Edison Storage Battery Co. 2

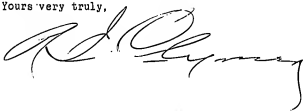
manufacturers from equipping with Edison batteries during the year 1912--feeling very sure, it is not necessary to say, that it was for some reason deemed to the best interests of our company.

I have recently read that Mr. Edison has about perfected his new electric motor: may I ask whether it is to be manufactured by the Edison Storage Battery Co. ? And if so, will you be kind enough to inform me what its uses will be, and wherein it is an improvement over the motors in present use ?

Hoping to hear from you quite fully and awaiting your reply with the greatest interest, I beg to remain, with my kindest regards to Mr. Edison,

Yours very truly,

P. O. Box 351

A handwritten signature in dark ink, appearing to read "A. J. Clymer". The signature is fluid and cursive, with the first name "A. J." and the last name "Clymer" clearly distinguishable.

[ATTACHMENT]

Mr. Edison

July 28th 1912 Fiscal year ends
Report should be
out between April 15th & 30th

Attn

The 500,000 is still in heavy
~~the end of~~ fiscal year
Ends Feb. 26, probably ^{or} ~~BE~~
out April 15 to 30, ^{most importantly} WE are
getting on our feet but
we are having awful competition
~~some~~ but are gradually building
up the business - WE made the
contract with Sullivan & Co.
all the others had secret
contracts with the lead people

and simply used the E. Catterly
to knock it - it is only
for 1912, it is only for pleasure
vehicles that ~~to denear~~
has it exclusive. The other
refers thought the Council
was to be a success they know
now that it is a failure
+ 3 of them use them no
more.

The EMFG Co
~~We~~ are going to mfr Motors
~~at the~~ that are especially
adapted to the battery
for use in small electric
trucks, no other maker
seems to be able to produce
a proper motor

[ATTACHMENT]

We are creating new uses for the
Battery. Have a hand down
mower which works fine
& are interesting the mower
people, also complete
System for Lighting Isolated
Country Houses -
Lighting Sparking Autos
Many other new things

Edison

CS 15C0.
CABLE ADDRESS "FANHALL" NEW YORK
TELEPHONE 2281 CANTLNEY

LIESERS, A B C 674 EDITION
AND WESTERN UNION CODES

PRICES SUBJECT TO CHANGE WITHOUT NOTICE,
CONTRACTS CONTINGENT UPON STRIKE OR
OTHER CAUSES BEYOND MY CONTROL, AND
SUBJECT TO APPROVAL BY HOME OFFICE OF WORKS.

FEB 13/12
FREDERICK A. HALL
2, 4th Ave., N. Y.
ENGINEERING AND SALES OFFICES
5-7-9 BEEKMAN STREET
NEW YORK

Mr. Thomas A. Edison

West Orange, N. J.

Dear Mr. Edison -

Knowing somewhat of how nearly
you approach the ideal in this direction I
assume that you wish to obtain all
possible economies in your works through
greater efficiency and contentment of labor.

I should like to bring a fellow member
of the American Society, who is rather well
known in this connection, to have a brief
talk with you on the subject, or better yet,
to meet you when in New York.

Yours Truly

F. A. Hall.

I am here at
Lab nearly every
day ask telephone
etc

[ATTACHMENT]

CABLE ADDRESS "FAHALL" NEW YORK

TELEPHONE 3381 CLEVELAND

LIEBERR, A & C 8th EDITION
AND WESTERN UNION CODES

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.
CONTRACTS ENTIRELY UPON STAPLES OR
OTHER CALIBRE RESINS, NY, CLEVELAND, AND
SUBJECT TO APPROVAL OF HOME OFFICE OF WORKS.

FREDERICK A. HALL
N. AM. SEC. N. E.
ENGINEERING AND SALES OFFICES
67-9 BEEKMAN STREET

NEW YORK Feb. 28, 1912.

Thomas A. Edison,
Edison Laboratory,
Orange, N. J.

Dear Sir:-

Mr. Laine and myself found our visit to the Storage Battery Plant
very interesting indeed yesterday. Mr. Gilbreth is the man who ought
have been there, but we saw a few little things which no doubt you would
have adjusted if you had had nothing else to do. This is not criticism
as we both thought you were doing a wonderful piece of "Hardware manufact-
uring" in turning out the product, which is of course a wonder in itself
in its accurate adjustment to physical and chemical conditions.

We venture to suggest the following in order to get at

"WHAT YOU WANT TO DO;"

1. Take up lost motion.
2. Take up slack between operations.
3. Cut out unnecessary red tape if any.

"WHAT YOU DONT WANT TO HAVE DONE;"

- a. Dont change any processes.
- b. Dont change any machines.
- c. Dont design any new machines.
- d. Dont interrupt manufacture.

It is easy enough to make rules but hard to get good men to carry them out. Under the above rules Mr. Gilbreth could not do much harm even if he did not do much good. We saw a number of places where he could make savings without interfering with your necessarily complex and complicated processes. We would like you and he to get together to determine what savings are possible along these lines. Mr. Laine believes that in the aggregate, he would save a satisfactory number of thousands of dollars

The factory you saw is in a promising stage there are lots of places where money could be saved

but there are so many things that must be done that we can find no time to go into the refinements of saving - The process is too tedious

E. Laine

[ATTACHMENT]

-2-

per annum. Should you decide to go ahead, Mr. Gilbreth could in your absence if you wish report to Mr. Bachman, (whom we have not seen).

I suggest that you can settle the matter very quickly before you go away. Have Mr. Gilbreth called up on the telephone either in New York or Plainfield, day or night, and he will come over at once if possible.

Telephone numbers and addressees are given on the enclosed slip. We are at your service.

With kind regards, I remain

Yours truly,

J. A. Hall

[ATTACHMENT]

CABLE ADDRESS "FAMALL" NEW YORK

TELEPHONE 8251 CORTLANDT

LIEBEN B. A. B. C. 8th EDITION
AND WESTERN UNION CODES

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.
CONTRACTS CONTINGENT UPON PRICES OR
OTHER CAUSES BEYOND MY CONTROL, AND
SUBJECT TO APPROVAL OF HOME OFFICE OF WORKS.

FREDERICK A. HALL

200 2ND. FL. N. Y.

ENGINEERING AND SALES OFFICES

5-7-9 BECKMAN STREET

NEW YORK

Frank B. Gilbreth,

Office-60 Broadway, New York,-Telephone-Rector 1320.

Residence-711 Ravine Road, Netherwood, Plainfield, New Jersey, Telephone

714 Party L.

William B. Laine- 60 Broadway, N. Y.-Telephone-Rector 1320.

Residence-400-W. 115th St., New York City,-Telephone-Morningside-252.

Frederick A. Hall,

Office- 5 Beekman St., New York-Telephone 8251 Cortlandt.

Residence-128 Ascension St., Passaic, New Jersey-Telephone-1397-L. Passaic

*to be
going*

Feb. 23/12

The Troy Electric Co.,
Troy, N.Y.

Gentlemen:-

We will require before long a quantity of small low-priced ammeters for use in connection with our charging rectifier for ignition batteries. The two sizes we will need at first will have a scale of 20 amperes and 10 amperes respectively. While great accuracy is not required, the instruments must be well built and stay in adjustment, and be of uniform quality.

Please advise what you can do, giving us full information, price, etc.

Yours very truly,

DHB/RS

CHIEF ENGINEER.

Saugamo Electric Company

Manufacturers of Integrating, Indicating and

Recording Electrical Instruments

Springfield, Illinois

U. S. A.

May 14, 1912.

JACOB BURN, PRESIDENT
HENRY BURN, V. PRES.
R. G. LANGRISH, MGR.

CABLE ADDRESS
SANGAMO-SPRINGFIELD
WESTERN UNION CODE

Bliss
May 14, 1912

Laboratory of Thomas A. Edison,
Orange,
N. J.

Gentlemen:

We have your letter of the 10th by Mr. Chesler, and are very much pleased to learn that the special amperes-hour meter which we shipped you some time ago for use in your operation of making nickle flake, has proven satisfactory. We can easily take care of the trouble which you experienced with the pin carrying the contact roller, and will be able to follow very nicely, your suggestion to make the travelling arm with roller, but having two small rollers set in the hard rubber disc. This, as you say, will do away with the continuous friction on the moving arm.

The meter furnished you was of 200 amperes rated capacity, but the shunt will carry 300 amperes without injury, although it would warm up quite a little at that load. If you expect to carry loads running from 150 to 300 amperes, we would prefer to make any future meters with a slightly increased carrying capacity in the shunt, but keeping the same ratio between the shunt and the meter, so that the speed, etc., of the meter for any load would be the same as the one you have. If you will simply specify the maximum and minimum load you expect to carry, we will see that the shunt is of proper size for your requirements. We can make up twelve of the meters per the above, and furnish them within three weeks from receipt of order. We have quoted you price in previous correspondence with Mr. Bliss.

We would also refer to the writer's conversation with Mr. Holland and Mr. Bee when at the Storage Battery factory the latter part of March. Mr. Elsas was not there that day, but Mr. Holland mentioned that it would be a pretty good plan if we could make the meter count the number of total layers of copper per nickel deposited. We could readily arrange to do this by letting one of the two

#2--Laboratory of Thomas A. Edison.

contacts on the hard rubber disc be connected to a suitable counting mechanism, so that closing of circuit to this point by the moving arm, would not only operate through the relay to stop that particular plating operation, but would also count one layer deposited.

We have recently developed, in connection with our regular ampere-hour meter for electric vehicle service, a distant operated dial mechanism which would be applied very nicely for this purpose, and if you would care to have the meters fitted with this feature, the dial mechanism could be placed at any desired point near to, or remote from the meter itself, and would give you a record of the total number of layers deposited in any operation. Furthermore, the dial could be arranged with a suitable contact so that after the requisite total number of layers had been deposited, a bell would be rung or a main circuit breaker operated, so that a signal would be made of the entire plating operation having been completed. If you should decide to have the meters furnished with the distant dial mechanism, we would make a charge of \$6.00 net extra each.

Hoping very much to be favored with your order, and thanking you, we are

Yours very truly,

SANGAMO ELECTRIC COMPANY

R. C. Lamplier
Sec'y.

RCL/MP

May 21st, 1912

The Sangamo Electric Co.,
Springfield, Ill.

Attention of
Mr. R.C. Lanthier

Gentlemen:-

We have your letter of May 14th regarding the Sangamo meter for nickel fleko department. Everything seems satisfactory.

Regarding the dial mechanism which you have recently developed, I would like to know more about it. Have you any photographs or drawings of same? If so, send them along.

Do you make full charge contact on your regular ampere hour meter for electric vehicles, i.e., when the moving arm comes back to zero after being fully charged, can you arrange a contact to operate through a relay which will trip a switch and open the charging circuit?

Thanking you in advance, I remain

Yours very truly,

EDISON LABORATORY

Per

JCC/ES

B.S.

A. J. CLYMER
VAN WERT, OHIO

June 24, 1912

Edison Storage Battery Company,

Orange, New Jersey.

Mr. R. P. Miller, Secretary-Treasurer,

My dear sir :

Referring to your favor of January 23d:
you advised me at that time that a comprehensive statement
would be issued in April, but as I have not yet received a
copy of same, I think your mailing clerk may have omitted to
send me one, or that it was lost in the mails. Will you kindly
forward another copy to my address ?

I should be much interested to know how the
Anderson contract has affected the Edison's business, whether
our output has been increased this year and how the unfilled
orders now stand, as compared with your last advice ?
I trust that the factory is running on full time and that prospects
are continually improving. May I ask what uses the Edison battery
seem best adapted to, and whether the difficulties presenting them-
selves in connection with electric carriages have been overcome ?

Will you kindly inform me, Mr. Miller, what
progress has been made in connection with the Edison-Eeoch cars ?
Perhaps three months ago, I read in a Chicago paper that Mr. Edison
had been there to contract (I think) with the Illinois Central,
C. & N. W. or some other line out of Chicago, for suburban or
interurban cars operated with Edison batteries: will you please

Henry got large amount of letters to me see it

Anderson contract given instructions for placing same in the past week if works out good, five units in working

Says we are changed with today we have them 1748 and worth of order in book

Break in down a large business school in growing 1-15-114

of battery after that date

A. I. CLYMER
VAN WERT, OHIO

Harry - Draw up Letter
Edison Storage Battery Co. #2

advise me how many cars you have contracted to equip, and when they are to be put into service?

I shall be much interested to have some extended information relative to the present business and progress of the company and the developments planned for the near future--in addition to the statement which which you advised would be issued in April.

Awaiting your very courteous reply, I remain

Yours very truly,

A. I. Clymer

*We only fairly turned the
corner in March in which
month we made \$18,000, net,
above bond interest,*

*Beach is making a selling
10 cars per month
I think he has orders
for 2000 cars
on hand*

ES 8560

NEWMAN, NORTHROP, LEVINSON & BECKER

JACOB NEWMAN
FALCON D. LEVINSON
BENJAMIN V. BECKER
CHESTER E. CLEVELAND
HARRY GOODMAN
ARTHUR L. SCHWARTZ

ATTORNEYS & COUNSELORS

CHAMBER OF COMMERCE BUILDING

CABLE ADDRESS "NEWLEBIO"

CHICAGO, July 25, 1912

Ans 8/1/12
H.F. Miller, Esq.,
Secretary-Treasurer,
Edison Storage Battery Co.,
Orange, N.J.

Dear Sir:-

Under date of January 8, 1912, you wrote me
as follows:

"Our next annual report will be ready sometime in
March of this year, when we will take pleasure in sending
you a copy, from which you will undoubtedly obtain the
information you desire."

Thus far I have received no such report. As a
matter of fact, although my certificate of stock is dated
February 1, 1908, I have never received a notice of any meeting
of stockholders, nor a report of any kind from your company.
Will you please therefore forward me copy of such financial
reports as have been sent to the other stockholders, and also
financial statement of the company's affairs?

Yours truly,

Harry Goodman

*Read it & say we have turned
the corner in March we are
making net about 18% toward
a month & this will increase
considerably*

*Harry
get same report
as I sent that
man in Ohio -
let me see
it & I
will dictate
a reply*

*750,000
we will
work it out*

85880
fig 1

Sangamo Electric Company

Manufacturers of Integrating, Indicating and

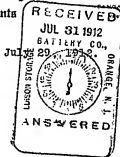
Recording Electrical Instruments

Springfield, Illinois

U. S. A.

JACOB BUNN, PRESIDENT
HENRY BUNN, V. PRES.
R. G. LANPHER, SECY.

SOLE ADDRESS
SANGAMO ELECTRIC CO., SPRINGFIELD
ILL., U.S.A.



Purchasing Dept.

Edison Storage Battery Co.,
Orange,
N. J.

Gentlemen:

We received Saturday, your order #30607, covering eleven, ampere-hour meters for control of nickel depositing, same as previous one furnished, and thank you very much for same.

We note your reference to our letter of May 14th, 1912, in regard to the features wanted. We have referred to this letter; also to yours of May 10th by Mr. Chesler, and are not certain whether or not you want a distant dial mechanism for recording the total number of layers deposited, as suggested on the second page of our letter of May 14th. If you want this you will also, of course, want the arrangement of letting one of the contacts each revolution operate the distant dial mechanism; also if you want the dial mechanism, please advise whether you wish to have it ring a bell after the proper number of layers have been deposited.

Outside of the question as to the dial mechanism, we will make the change in the arrangement of the moving hand, and will put the two little platinum rollers in the hard rubber dial as referred to in the above letters.

We will also make the meters of 300 amperes rated capacity, but shunted so as to give the same speed ratio as in the original meter.

Finally, we understand that you wish the meter to close circuit alternately, every 5000 and every 18750 ampere seconds, same as the one furnished in February.

#2--Edison Storage Battery Co.

As soon as we hear from you on the above
pointw, we will go ahead and can put the meters
through in about three weeks, as promised.

Again thanking you, we are

Yours very truly,

SANGAMO ELECTRIC COMPANY

R. C. Laphier,
Sec'y.

RCL/MF

August 2nd 1912.

Sangamo Elec. Co.,
Springfield, Ill.

Gentlemen:-

Attention of Mr. R. C. Lamphier

Re: our order #30607 and your letter of July 29th wish to say that we want a distant dial mechanism for recording the total number of layers deposited, also the ringing of a bell when the proper number of layers have been deposited.

The 500 ampere capacity meter with contacts to close the circuit alternately every 5000 and every 18750 ampere seconds is perfectly satisfactory.

Please be careful to have the roller contacts and roller axles all platinum, as there is where trouble is likely to start.

Thanking you for your prompt attention, we are,

Very truly yours,

EDISON STORAGE BATTERY CO.

BJD.:REP

Sangamo Electric Company

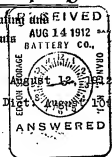
JACOB BUNN, PRESIDENT
HENRY BUNN, V. PRES.
R. C. LANPHER, SECR.

Manufacturers of Integrating, Indicating and FIVE

Recording Electrical Instruments AUG 14 1912
BATTERY CO.

Springfield, Illinois

U. S. A.



CABLE ADDRESS
SANGAMO-SPRINGFIELD
INTERNATIONAL TELEGRAPHIC UNION CODE

Mr. J. Chesler.

Edison Storage Battery Company,
Orange,
N. J.

Gentlemen:

We have yours of the 6th, and note that you usually deposit 125 total layers of nickel in your plating process. This is what we had understood, and we will, therefore, make the distant dial mechanisms with a fixed contact at 125 layers, instead of the movable contact, unless you advise by return mail that movable contact is desired. We think this will make a very satisfactory arrangement, and somewhat simpler than if we had to use a movable contact.

We will now go right ahead with the work on the meters.

Yours very truly,

SANGAMO ELECTRIC COMPANY

R. C. Lanpher
Sec'y.

RCL/MF

Signed in absence of Dictator

Address all communications to the company

65.00

Harry (Nov 10/15)
Day that is well has the report of
stockholders meeting next Nov 12/15

W. & J. SLOAN
NEW YORK

~~states~~ I understand that we
were making a profit of about
\$25,000. per month

I have been patiently
waiting for past year and more to
obtain the promised information
as to the condition of the Edison
Storage Battery Co. in which as you
doubtless know I have an interest
to the extent of 100,000 Bonds and
600 Shares of the Stock. Your office
has repeatedly advised me, in reply
to my inquiries, that everything
was going on satisfactorily and I
would receive the information
asked for "very soon" - but it has
never come. I think I am

entitled to know the condition of
the Company's business - and what
the prospects are for a dividend
on the stock - You assured her
humbly and myself, that ~~some~~
day we would find that stock
as valuable as the Laekawanna
Railroad - is that day near at hand?
I dislike bothering you, but I must
know something definite about
any Company in which I have
an interest - So please let me
hear from you.

Yours truly,
M. H. Deane

If you know of anyone who would like
to buy my bonds at par & interest kindly
let me know

Sangamo Electric Company

Manufacturers of Integrating, Indicating and

Recording Electrical Instruments

Springfield, Illinois

U. S. A.

Oct. 21, 1912.

JACOB BUNN, PRESIDENT
HENRY BUNN, V. PRES.
R. C. LAUFRIER, MGR.

HEAD OFFICE
SANGAMO-SPRINGFIELD
WESTERN UNION BLDG.

Mr. J. T. Chesler,

Laboratory of Thomas A. Edison,
Orango,
N. J.

Gentlemen:

Your letter of the 14th was received during the writer's absence last week, and was held for his return.

We are now working on your meters and hope to have them completed next week without fail. In the meantime, we note that you wish the distant dial mechanism to record total layers; that is, both nickel and copper, making a total of 250. As a matter of fact, we had already gone ahead with the design of a dial mechanism made in this way, as the operation of the two contacts in the meter for the alternate layers of copper and nickel will operate through a 3-wire circuit to the dial mechanism and the hand will move first on the deposit of a layer of nickel, then of copper, and so on.

We will, therefore, show on the dial mechanism, 250 total layers, or 125 double layers of copper and nickel.

The dial mechanism—as previously described to you, has no permanent recording device; that is, does not punch or print any paper, but simply indicates by a large hand, the total number of layers put on, and will have a contact at the 250 total layer point to indicate the completion of the operation. We are not prepared at this time to supply any form of recording device which would have to print or punch a paper.

Trusting this will put the matter entirely satisfactory, we are

Yours very truly,

SANGAMO ELECTRIC COMPANY

R. C. Laufrier,
Sec'y

RCL/MFP

Oct. 26th, 1912

The Sango Electric Co.,
Springfield, Ill.

Attention of
Mr. R. C. Lanphier

Gentlemen:-

We have your letter of the 21st instant and note that you will ship our meters for nickelplating work next week. Also note that the dial mechanism is not just what we want, but since you have not made same up, you had better consider our order cancelled on this. If there is any charge for the design or layout of this device, I suppose you will have to charge that up on the bill.

Anxiously awaiting shipment of the meters, and thanking you for past favors, we are

Very truly yours,

JC/ES

EDISON STORAGE BATTERY CO.

Per

WM N. JANVIER
PRESIDENT
OWNERS-OF R. F. ALLEN CO.
U. S. AGENTS FOR
BEECHAM PILLS
SHEPHERD'S DENTIFRICE

ESB Co
HERBERT FISK
TREASURER

WM MCKINNEY
SECRETARY
TELEPHONE 1022 SPRING
CABLE ADDRESS
"PEARL" NEW YORK

CHICAGO
309 & 311 WEST WABASH ST
ROCK
186 PURCHASE ST

WALTER JANVIER

U. S. AGENT FOR
PEARS' SOAP
STONES LINE JUICE
FIXIT

417 & 421 CANAL STREET

NEW YORK

Boston, Mass.

Mr. Thomas A. Edison,
West Orange, N. J.

Dear Sir:-

A letter has just been forwarded to me from your office in New York stating that the annual meeting of the stockholders of the Edison Storage Battery Co. will be held at the office of the company West Orange, Monday November 4th at 12 noon. Your Secretary requests that I fill out and forward proxy to you if I am unable to be present.

My brother, W. R. Janvier, formerly doing business at 365 Canal St., New York, died on January 29th, 1911, and I was made executor of his estate. I found among his securities one bond of \$1000 of the Edison Storage Battery Company and five shares of stock, and I as executor of his estate, am filling out the proxy and will ask you to kindly act for the estate.

My attorneys, Messrs Oudin & Oakley of 45 Broadway, advise me that I should sell the bond and five shares of stock in the Edison Storage Battery Co., and they, acting for me in making return to the Comptroller of New York, valued the bond at its face value of \$1000, and the five shares of stock at \$2 per share. I am anxious as the executor of my brother's estate, to sell this bond and five shares of stock, and my attorneys advise that I should get the face value of the bond with accrued interest, and \$2 per share for the stock. The question is, will you take up the bond and five shares of stock at the above named price. Two brokers here in Boston have tried to

[ON BACK OF PRECEDING PAGE]

Say
Don't sell your bonds shares
See Mr. Cant he will tell
you about the Co which
is now very prosperous

E

WM H. JANVIER
PRESIDENT
OWNERS-OF-S.F. ALLCH-ED.
U.S. AGENTS FOR
BEECHAM HILLS
SHEFFIELDS DENTIFRICE

HERBERT FISK
TREASURER

WM MCKINNEY
SECRETARY
TELEPHONE 1028 SPRING
CABLE ADDRESS
PEARS' NEW YORK

WALTER JANVIER

U.S. AGENT FOR

PEARS' SOAP
STONES LINE JUICE
FIXIT

417 & 421 CANAL STREET

NEW YORK

CHICAGO
309 & 311 WEST RANDOLPH ST.
BOSTON
186 PURCHASE ST

#2...T.A.E.

dispose of the bond and stock for me, but they have not as yet found a purchaser. An early reply will be fully appreciated by

Yours respectfully,

Estate of Walter Janvier,

W. H. Janvier Esq.

W.H./R.

F. S. The five shares of stock above mentioned are made out in the name of W. R. Janvier. In explanation of this will say that as a youth he assumed the letter R as middle initial, he having been christened by his parents as Walter Janvier. For a number of years he signed all legal documents W. R. Janvier, but for several years the latter part of his life he signed all checks and legal documents Walter Janvier. I give you this explanation so that you will know that W. R. Janvier and Walter Janvier were one and the same person.

Mr E.-

The first of the 75- $\frac{1}{4}$ "
Loading Machines is in work
at Baiting Co.

Writes Jim

They are well pleased
with it. Everyone in loading
now says it is the best
machine they have -

Three ~~more~~ more machines will
be sent on Monday & 12
tired up & put up with jump
sacks over them. If the
tarp racks come in as promised
these 4 machines will
go into service about Wednesday.

The ratchets & tarp racks
are the only things holding
us up & we are rushing the
manufacture on them.

12-13/12

W.H.

65000.
A. I. CLYMER
VAN WERT, OHIO

December 19, 1912

Edison Storage Battery Company,
Orange, N. J.

Mr. Wm. H. Meadowcroft, Secty.,

Dear sir :

Referring to the special meeting of stockholders of the Edison Storage Battery Company, held at the Company's office in West Orange on 10th instant, may I ask you to very kindly inform me what action was taken upon the several subjects under consideration ?

I should be glad, also, to know what amount of unfilled orders you have on hand and what recent monthly profits have been made ? (Mr. Miller has given me this detailed information in the past, in which I am always greatly interested.)

Are you in position to advise me, confidentially, what arrangements have been made for furnishing any electric carriage manufacturer or manufacturers with the battery during the coming season ?

I will also ask what are the principal uses for which the battery is at present made ?

If new buildings are to be constructed, what will be the percentage of increased capacity ?

Awaiting your reply with much interest, I am

Very truly yours,

P.O.Box 351

A. I. Clymer

[ON BACK OF PRECEDING PAGE]

Darry

Earnings are running about 25,000
monthly. ~~The~~ ~~stockholders~~ send him
copy of what stockholders authorized
~~—~~ We have an order from the
Ford Auto Co for about 4 million
dollars worth of battery per year
for their new self starter. They build
next year 150,000 autos. I am
advancing the money ^{for building & reaching} ~~for building & reaching~~
Cash ~~getting battery~~ ^{for Ford pays} The Co
is allowed to make 10% net from these
profits. They pay for the reaching & building.
The principal use for battery is
trucks, train lighting & storage.
Battery Cents — Outpost now is
700. At per day we have machinery
re-furnished to go to 1000 daily.
The Ford order is for 1500 per day
additional — orders on book are
off & every one can buy —
this information is strictly Confidential.

fill in

Copy

A. I. CLYMER
VAN WERT, OHIO

December 30, 1912

Edison Storage Battery Company,
Orange, N. J.

Mr. E. F. Miller, Treasurer,

My dear sir : I wrote the company on 19th inst.,
requesting certain information, and have received no response.

Noticing in the circular letter of 4th inst., calling a
special meeting of the stockholders, that same was signed
"Wm. H. Meadowcroft, Secretary," in your familiar hand, if I
mistake not, I thought that perhaps my letter should properly
be addressed to the Secretary for reply; however, receiving no
answer up to the present time, I feel like writing to you direct,
as Mr. Meadowcroft, having only recently taken up the duties
of Secretary, may not know to what extent you have so kindly
informed me of the details of the business, in which I am greatly
interested. May I ask you to kindly let me hear from you,
Mr. Miller, with reference to the matters touched upon in my letter ?
It will give me the satisfaction that your letters have always rendered
and I shall await your favor with much interest. Wishing the
company and all connected with it all possible prosperity in the
New Year, I beg to remain

Very truly yours,

A. I. Clymer

File
August 7th, 1913.

Quigley Furnace & Foundry Co.,
Attention Mr. W. G. Quigley, V.P.,
Springfield, Mass.

RAB-9-876

Dear Mr. Quigley:

I am enclosing herewith memorandum just received from Mr. Edison. Will you kindly note and return to me.

From the tone of your letter of August 4th it appears that you are sparing for time. According to Mr. Edison's memorandum your men agreed to proceed with the work if we would furnish canvas to cover the work. There is no reason in the world why this cannot be done. Mr. Edison does not wish to relieve you of the responsibility in connection with the building of the furnaces, but will do all we can to assist you in seeing that fire clay or bricks will not be ruined by rain; will furnish all tarps necessary to cover them and will also assist you in covering them should a storm come up and to furnish any labor necessary to do this.

It was through my honest efforts that you secured this job in the first place, as it was Mr. Edison's wish that I should go ahead and employ enough help to erect these furnaces ourselves. Is it your intention now to go back on your faithful promise to me to see that these furnaces would be in operation at a certain date? This is more serious than probably you realize, and hope that you will make every effort to rush this work through.

Mr. Edison makes mention of holding up check for part shipment, but I will see that this will go forward to you and hope that you will make every effort at your end of the line to assist me as well as I am trying to assist you here. Please bear in mind that I have a great deal to contend with here and I had figured that I washed my hands entirely of the furnace responsibility when I turned it over to you, knowing that you were fully capable of taking care of the situation, and feel after receiving this letter you will get your men to work and get started on the job.

Yours very respectfully,

EDISON STORAGE BATTERY COMPANY,

V. P. & Gen. Manager.

SPRINGFIELD, MASS.

NEW YORK N.Y.

CHICAGO ILL.

QUIGLEY FURNACE AND FOUNDRY CO.

SPRINGFIELD, MASS.

FURNACES FOR ALL INDUSTRIAL REQUIREMENTS

COMPLETE FURNACE EQUIPMENT.

FOUNDERS & MACHINISTS

SPRINGFIELD, MASS. Aug. 8, 1913.

CABLE ADDRESS "QUIGFURN"
UNIONPAC A.S.C.
AND WESTERN UNION
CODES USED
PHONE 205

Mr. R. A. Backman, Vice-Pres. & Gen. Mgr.,
Edison Storage Battery Co.,
Orange, N. J.

My dear Mr. Backman:

Your letter of the 7th inst. with note from Mr. Edison received, and we are afraid that you do not exactly understand the conditions or you would not accuse us of not doing everything we can to facilitate the completion of the furnaces. In fact, we have turned lots of corners in order to anticipate the completion of the work.

We received your order on June 11th. We were held up fourteen days or until June 25th awaiting information from you. The delivery specified was six to twelve weeks, making Sept. 17th the date of completion. Adding the fourteen days lost it would bring the completion of the furnace to Oct. 1st if we took full advantage of the time, but unless something unforeseen occurs we should have the furnaces completed by Sept. 17th, as you know we have shipped practically all of the material necessary to keep the men busy. We had our man on the job with our Foreman Mason, and owing to the condition of the building could not start the brick work, and were obliged to send him elsewhere. The builders who are erecting the building have lumber and material strewn all over our foundations, making it impossible for us to haul in the brick, and our Mr. Rockefeller advised us yesterday that it was necessary for him to knock off work until Monday. This delay, as you must know, costs us

Chairman is Mr. M. Hammerstein
Had them running the saw

SHEET No. 2 GUILLEY FURNACE AND FOUNDRY CO.
TO E. S. B. Co.

money, and we would much rather have our men busy.

We do not want Mr. Edison or yourself to feel that we are not doing all that we can, and we believe that if he understood the conditions he would not have written you such a note, as we must take exception to the statement that "you have to keep a sharp watch on us and that we will take advantage of you", as all of the delays up to this time have been caused by yourselves.

We instructed our engineer to go ahead with the understanding that you would keep the materials covered and protect them from the weather.

Would also call your attention to the fact that although our contract calls for you to unload the material and place same adjacent to our foundations, which was not done, that it was necessary for us to get a team and stone boat and haul the material a considerable distance, which I believe our Mr. Rockefeller took up with your company with the understanding that this was at your expense.

took care of this problem

I agree with you that you should not be bothered with these matters, and as far as our work is concerned, in spite of all of the delays to date, if your company will co-operate with us we will have no trouble in completing the work within the time specified in the contract.

Regarding the payment, would say that we received the check and note covering same, for which we thank you.

We beg to quote below extract from Mr. Rockefeller's report of the 7th inst., which explains matters:

"As per my phone conversation with you to-day, I will be delayed two or three days or until the roof trusses are raised. Therefore, I sent Mr. Ingram (our Foreman Bricklayer) to Springfield tonight."

FORM 71 8-26-15

SHEET No. 3

QUIGLEY FURNACE AND FOUNDRY CO.

TO E. S. B. Co.

I fully appreciate your kindness in throwing this order to us, and assure you that we have done and will do everything that we can to help you, and I wish that you would personally investigate and set us straight with Mr. Edison.

Yours very truly,

QUIGLEY FURNACE & FOUNDRY CO.

W. S. Quigley
Vice-President.

WRQ/JL

Durand
Hudson
Mr. Edison. Bates -

Nov. 30, 1914

It is the established policy of this company ever since the days of Gilmore that salesmen such as Hudson Durand etc are not allowed to know the profit or losses of their respective departments.

It seems to me that if we have enough confidence in a man to give him the business of the department to take care of he is responsible enough to know how he is doing. I can see no valid reason for his not knowing profit or loss and can see a number of reasons why he should.

What is your opinion? C.S.

EDISON STORAGE BATTERY CO.

MEMORANDUM

September 10th, 1915.

RAB-11-420

Mr. Edison:

Harry Miller
Search this - wired glass
to sell it

Mr. Warren Noble, Vice President of the Frantz Premier Co., Cleveland, Ohio, called this morning and informed me that they were building a large factory and were undecided on the glass they were going to use and did not know whether to use wired glass or plain glass. I told him that in case they decided to use plain glass we could make them a very attractive proposition, as Mr. Edison had some for sale. He told me to write and tell the approximate amount of glass we had and all the glass you have at the Laboratory that you are now taking out. Please have the party responsible for this, communicate with Mr. Noble, as he may be in the market for same.

R. A. Bachman.

EDISON STORAGE BATTERY CO.

MEMORANDUM

January 11th, 1916.
WGB-2-128

Mr. Mespowcroft and file:-

Here's the letter from Cutting which explains
all about the records that Mr. Deatur was talking about,
and about which I wrote.

W. G. BEE.

Enclosures -

*Better say it would
be right.*

Mr Edison

*Evidently, the decision rests with
you as to whether you want to duplicate
these records. If you don't, we could write & say
that on account of risk in transportation &c. &c.
you would not want to chance it. Mespowcroft.*

WGB

6522

[ENCLOSURE]

THOMAS A. EDISON
PRESIDENT

W. G. BEE
VICE PRESIDENT

ARTHUR MUDD
SECRETARY

H. F. MILLER
TREASURER

Edison Storage Battery Supply Co.

Main Office Orange, N.J., U.S.A.

San Francisco, Cal., U.S.A.

January 5, 1916

E. M. CUTTING, MANAGER
WESTERN BRANCH
441 GOLDEN GATE AVENUE
Phone Market 4511

IN REPLYING ADDRESS THE
COMPANY AND REFER TO

SP2-12

Mr. W. G. Bee,
477 Main Street,
Orange, N. J.

ALL ORDERS OF THIS COMPANY ARE SUBJECT TO THE FOLLOWING CONDITIONS: 1. OTHERS NATIONAL AND FOREIGN SUBJECT TO CONNECTION. 2. PRICES SUBJECT TO CHANGE WITHOUT NOTICE. 3. ALL PRICES AND DELIVERIES UNDER AGREEMENTS APPROVED BY F. O. D. ORANGE, N. J. 4. THIS COMPANY WILL NOT BE LIABLE AT ORANGE OF ANY RELAY IN HANDING DELIVERIES DUE TO CHANGES FROM INCOMPLETE OR CHARGE BEING FOR CONTAINER. 5. DELIVERABLE FOR DELIVERING WILL BE ALLOWED UNDER MADE WITHIN FIVE DAYS AFTER RECEIPT OF ORDER. 6. THIS COMPANY DOES NOT ASSUME RESPONSIBILITY FOR LOSS OR DAMAGE IN TRANSIT.

My dear Mr. Bee:

I am returning herewith letter from you addressed to Mr. Meadowcroft written on Seattle Office Stationery, also letter from Mr. Meadowcroft to you under date of Dec. 6th., regarding soft wax records which are in the possession of Mr. Decatur of The Western Union Telegraph Company of San Francisco.

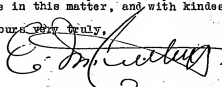
Have to advise that it has been very hard for me to get hold of Mr. Decatur and after several attempts I finally got him on the telephone and he told me that ordinary dictating machine records were made of The Morse Code Talk which passed back and forth between various operators at The Telegraphers' Banquet given to Mr. Edison in San Francisco.

These records have been very carefully preserved, packed up and have been among the valuables of The Western Union Telegraph Company of San Francisco, but they would be shipped to Mr. Edison at Orange if he desired to have same for reproduction in more permanent form, but very naturally The Western Union Company would like to receive the original records back, or a least a set of the more permanent records which might be made up.

Mr. Decatur very clearly stated that neither he personally nor The Western Union Company have any particular wish in this matter; in other words they are not requesting that permanent records be made from these soft wax cylinders, but naturally they look upon these cylinders as possessing considerable historic value to them, but they are perfectly willing to furnish same to Mr. Edison but would like the originals or duplicates or both.

At your convenience kindly advise any further action which you wish to have me take in this matter, and with kindest personal regards, I remain,

Yours very truly,



ENC/ES

[ENCLOSURE]

Encl. address "Edison, New York"

From the Laboratory
Thomas A. Edison,

Orange, N.J. Dec. 5th. 1915

Mr. William G. Bee,
Edison Storage Battery Supply Co.,
441 Golden Gate Avenue,
San Francisco, Calif.

Dear Mr. Bee:

Please do not think that because I do not write oftener that I am forgetting you. We are so awfully busy around here that it is simply impossible to attend to our mail promptly. This is Saturday afternoon, and I am just trying to clean up correspondence that has been on my desk all week.

I showed the enclosed letter to Mr. Edison, but he doesn't seem to understand what it refers to. I suppose it is not necessary for me to say that I do not understand it, as I did not know any of the details that took place during Mr. Edison's visit to the Coast. I am afraid we shall have to ask you to make it very clear so that he will know just what is being referred to.

Trusting that you are feeling in fine shape, and with kindest regards, I remain,

Yours very truly,

CHAS. W. MANAGER
Edison Storage Battery Supply Co.

DEC 15 1915

441 Golden Gate Ave., San Francisco
MARKET 4511

Enclosure

[ENCLOSURE]

EDISON STORAGE BATTERY SUPPLY COMPANY
INTER-OFFICE LETTER FROM SEATTLE, WASH.

TO MR.

William M. Meadowcroft,

DATE NOV., 24th.

ADDRESS

Orange.

REFER TO

SUBJECT

REPLYING TO
YOURS OF

My dear Meadowcroft:-

Mr. Deatur of the Western Union Telegraph Co., of San Francisco spoke to me the day I left San Francisco to take up with Mr. Edison the question of making duplicate records from the records that they took on Edison Day. I understood him to say that he had the cylinders, -all soft wax records business dictating machine type. He told Mr. Edison that he would have duplicates made and send them to him, but when he commenced to investigate, he found that they would cost more than he could really afford personally as he had no fund to draw from. He asked my opinion about it, and I told him that if he thought Mr. Edison wanted them, we would be glad to duplicate them ourselves. He has the records all packed, and will ship them to you, if he has not already done so. Will you take this up with Mr. Edison and write him direct at the San Francisco Western Union Telegraph Office.

OFFICE OF STATEWORK
Edison Storage Battery Supply Co.
DEC 15 1915
441 Golden Gate Ave., San Francisco
PHONE MARKET 4511

Kindsst respects.

H. Bee

3838

January 26, 1916.

Mr. Edison:

I am now ready to take up the matter of the Walker truck representation, for selling to the Government.

I suggest that you drop Mr. Insull a note, at your convenience, telling him you think it would be a good plan. We can do it under the name of Mr. Moran, who is with me now, and let the whole transaction be in his name, so as not to prejudice us by the truck makers against the Edison Battery by such an arrangement.

I want to go aggressively after this work, and am taking it up with Ward along the same lines for the smaller trucks.

The specifications are being written at the present time, covering the electrical trucks for the Post Office Department, and I want to hit the iron while it is hot.

I would write the letter for your signature, except that Mr. Insull's connection of many years with you is of such nature as to render it better, I think, for you to word it in your own language.

M. R. HUTCHISON.

Say
I
Insull-

6768

My Engineer Hutchinson wants
your Walker Co to give him a
chance to put them with the Post
Master Genl a deal Employing
Walker trucks, & Ward trucks
off the small signs I think he
can hand a large order if you
make deal give him a little time
to put it thru - 2

EDISON STORAGE BATTERY COMPANY

MEMORANDUM

January 27, 1916
AM-8-607

Mr. Edison and file:

I have ready for your inspection statements for the months of September and October.

Mr. Meadowcroft informs me that you are very busy and that inasmuch as the results shown by the statements are good, he suggested that I write you and give you a short summary. When convenient to you Mr. Bachman and myself will be glad to go over the statements with you.

September sales amounted to nearly 14000 A4 equivalent with a total value of over \$156,000.00. The net profit was slightly over \$25,000.00.

For October the sales were over 20,000 A4 equivalent and the value over \$218,000.00. The profits were over \$45,000.00.

In October we made a bookkeeping entry of \$19,157.98 to adjust the value of the Chemical Works account as of February 28, 1914 which makes our statement for October show an apparent profit of \$64,389.81.

Our net surplus on October 31st was \$514,666.53 and if we add to this amount the surplus of the Chemical Works on this date of \$8126.36 we will have a surplus on the combined balance sheets of the Storage Battery Co. and the Chemical Works of \$522,792.89.

The cost of the cells remains surprisingly uniform but we are getting a little cheaper cost now on account of the lower cost of soda solution as compared with potash solution.

ARTHUR MUDD.

January 31st, 1916.

Mr. Edison:

I hand you herewith an extract from a communication received from Mr. Maurice B. Fox, dated January 16th, in which he advises as to the satisfactory business being done by Edison Accumulators, Limited.

By referring to the last paragraph of this extract, you will note that on account of having a successful year, Edison Accumulators, Limited, expect to declare a dividend. If this is done, it will be the first time since the organization of the company was effected.

WALTER STEVENS.

Encl.

W S
C

C.C. to Mr. H.G. Thompson.

[ENCLOSURE]

EXTRACT FROM LETTER RECEIVED FROM MR. MAURICE E. FOX,
DATED JANUARY 16TH, 1916.

Since my last report to you, there has been nothing remarkable to note here, except the gratifying number of sales of accumulator vehicles. Since that time, we have sold about fifteen large trucks and ten small industrial trucks. During the last few weeks, there have been sold an average of four vehicles per week:

Some time ago, negotiations were entered into with one of the omnibus companies of London for the supply of an Edison battery 'bus. This has been built, and although the Scotland Yard regulations specify that a passenger-carrying vehicle must not weigh more than six tons fully loaded, we managed to keep down the weights so as to come within the requirements. Unfortunately, however, when the completed vehicle was offered for inspection, the Police took exception to the form of steering gear, width of axles, in fact, which involved practically a change in the design, - so that we found it impracticable to get the vehicle past them. It looks, therefore, as if London's streets must wait for some future date before they will see an electric omnibus. In the meantime, the body-builder threatens to sue for the price of his body, which is useless to us, so I anticipate losses. Edison Accumulator, Ltd. will have a good 'bus body for sale at a low price. The outcome of this affair is unfortunate, as important business was expected after this first vehicle was put into operation.

Edison Accumulators Ltd. have had quite a successful year, and it is said a dividend will be declared as a consequence.

EDISON STORAGE BATTERY COMPANY

MEMORANDUM

April 29, 1916
AM-8-3439

Mr. Edison and file:

Sometime ago you spoke to me regarding the Mine Lamp situation and seemed to feel that we had not handled the situation properly and charged a high enough price for the outfit.

I have gone carefully into the matter and have found out that the reason why we did not make a greater profit heretofore was due largely to the fact that we were manufacturing in more or less limited quantities. By reason of this the Assembling Department was not able to cut down their cost as they are now doing by having a large quantity coming through and keeping the operators specialized on one kind of work. Considerable labor was also necessary in fitting the various parts which is now being eliminated by new dies and bending fixtures. Minor changes in construction have been made and simpler methods used which will have a tendency to reduce the cost.

We have also had to replace some of the parts such as cords and springs for holding the bulbs in the reflector.

Due to low production we have not been able to get a very good line on the cost on account of the parts being taken from one operation and group to another, in some cases without the necessary records being secured. All this has practically been overcome now and I see no reason why the Mine Lamp should not be a very fine paying proposition at \$11.00 per lamp each list, less maximum discount of 40% or \$6.60 each net and providing of course we continue to manufacture in large quantities.

We are now using the Toman metal container for holding the cells instead of a Monel Metal one which has reduced the cost materially.

I had our Cost Keeper take off the cost of the complete outfit and computing the overhead at the present rate of 14% and the total factory cost was \$3.78 per outfit.

The following figures represent my estimate of profit on a

PRODUCTION OF 100,000 LAMPS

Factory cost (which will be reduced)	\$3.78 each
Shipping	.04 each
Advertising (\$2000 per year)	.02 each
Selling & Service (\$5000 per year)	.06 each
Total Cost to Make & Sell	\$3.90 each

EDISON STORAGE BATTERY COMPANY

MEMORANDUM

-2-

Selling Price

\$11.00 each list Less 40%

\$6.60 net

Cost to make and sell

3.90 net

Net Profit

\$2.70 net per lamp

On a production of 100,000 lamps complete
per year this would amount to \$270,000.

ARTHUR MUDD.



EDISON STORAGE BATTERY COMPANY

MEMORANDUM

July 8th, 1916.
BAB-9-764

Mr. F.A. Edison
Mr. Chas. Edison
Mr. A.G. Emery,

Regarding the windows which are now being placed in the Storage Battery buildings. It appears that we will have to give more ventilation than we had originally figured on.

Yesterday afternoon at 4 o'clock the men in the Tool Room unanimously packed their tool chests and put on their coats and hats and were ready to leave the department in a body, not in the form of a strike, but every man decided he would quit and leave the place on account of the ventilation we had promised them. I informed them we would ventilate alternate windows top and bottom. They positively refused to work under these conditions and demanded we ventilate both top and bottom, giving them 100% ventilation. They maintained that the general attitude with other manufacturers is to better the working conditions in a factory and from the present appearance it would mean we are not working on the same lines.

This same condition prevailed in the Screw Department and also in the Punch Press Department. In as much as we have been able to free ourselves from labor trouble here up to this time I would strongly recommend not to do anything to antagonize the organization, especially at this time. I would recommend that we make arrangements to swing the windows both top and bottom, giving 100% ventilation. The windows in all of the new buildings give 50% ventilation the same as we had contracted for with the exception that all the ventilation takes place in the upper sash, the lower sash being permanent. This is the part the men object to, as they want to have part of lower sash and also part of upper sash open so as to give proper ventilation.

I placed a notice in the Tool Room this morning and informed them I would personally see that the windows would be hinged both top and bottom in this particular department. The contractor informed me yesterday he would pivot the lower sash on his own accord on the Ashland Avenue side. This would only leave two other sides for the company to pay for.

It was generally agreed we would make arrangements to swing every other window, but the demonstration yesterday afternoon proved conclusively we would have to go further than this unless it is your desire to fight the situation.

A prompt decision is requested on this in as much as Mr. Emery is about to execute a contract, which I understand has not been signed up to this time, for the windows.

R.A. BACHMAN

*Mr Edison says
he allows Emery
permission with
Mr Bachman
7/8/16*

EDISON STORAGE BATTERY COMPANY

MEMORANDUM

July 12th, 1916.
BAS-9-791

My dear Mr. Edison:

file
When Dr. Greenley left the Edison Storage Battery Company I asked you for a recommendation for him, as I believed he was entitled to one.

At that time I had a further talk with Greenley and had reasons to believe he was not going to South America as he told us he would, and I took the liberty of holding up the recommendation for further developments, and told him I had not been able to see you to get a recommendation for him, but I would mail it to him if he would give me his address. He could not give me his address and for this reason I decided to wait until I heard further from him.

I learned through Mr. Hutchison today that Greenley is in London and is employed by the Vickers Company. I am therefore returning the recommendation to you, as I do not think he is entitled to such a valuable document coming from you.

I hope this meets with your approval.

Fierce!
mm

Robert A. Bachman

EDISON STORAGE BATTERY CO.

Orange, N.J.

August 22, 1916.

Marmad Foxe

Mr. J.F. Dumot,
Orange, New Jersey.

Dear Sir:

1. Several years ago you forwarded to me originals and translations of proposed arrangements between yourself and the firms of Panhard-Levassor and Delaunay Belleville, for the exploitation of Edison Storage Batteries, submarine cells excepted, in France, the French Colonies and Belgium. These agreements you wanted me to approve.

2. The European War broke out about that time and I have never taken the time to read and analyze the said agreements. I will do this, however, by the end of the war, realizing that those companies are not able to carry the proposed arrangements through during the war conditions.

3. In the meantime, and until this permission is revoked by me or by the Edison Storage Battery Company, you are hereby authorized to call Edison Storage Batteries, except submarine type cells, on an exclusive sales right basis such as is enjoyed by Edison Accumulators, Ltd., with which you are familiar, it being understood that the discounts to you for this French right are the same as to Edison Accumulators, Ltd., viz: 33% and 25% f.o.b., New York on regular cells and parts, potash electrolyte excepted, and 40% and 25% f.o.b., New York on Type K-6, K-20 and mining lamps, all cash against shipping documents in New York.

4. You also assume responsibility for guarantees and, in fact, conduct the business exactly as per the arrangements with the Edison Accumulators, Ltd.

5. It is understood that the Edison Storage Battery Company or myself have the right to revoke this temporary arrangement at any time, in writing or by cable.

6. When the war is over and you are ready to go ahead with Delaunay-Belleville and Panhard Levassor, if the proposed arrangement is satisfactory to me, I will accept these agreements and enter into a regular contract with you in the French and Belgian business.

Mr. J.F. Monnot,

-2-

August 22, 1916.

7. The list of the French Colonies, etc., is as follows:

Algeria
Corsica
French West Africa
Senegal
French Guinea
Ivory Coast
Upper Senegal
French Congo
Tunis
Madagascar
Somali Coast
Comoro Islands
Mauritius Islands
French Indo-China
St. Pierre and Miquelon
French Guiana
Martinique
Guadeloupe
New Caledonia
Tahiti
Famaleo Archipelago
Morocco

Respectfully,

EDISON STORAGE BATTERY COMPANY

Thomas A. Edison, Pres.

Arthur Hadd, Sec'y

Witness

R.H. Hutchison

Accepted
J.F. Monnot

EDISON STORAGE BATTERY COMPANY

MEMORANDUM

August 31st, 1916.
RAB-9-1056

Mr Pederson:

I am enclosing herewith letter from the Department of Health of the State of New Jersey, also copy of law relating to pollution of fresh water streams, with reference to pollution of the Second River running near the plant of the Battery Company.

Kindly note letter and return, and take such action as is necessary

R.A. RACHMAN

[ENCLOSURE]

DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY

Trenton, August 30, 1916.

Edison Storage Battery Company,
Mr. Robert A. Bachman, General Manager,
West Orange, New Jersey.

Dear Sir:-

It was reported by a representative of this Department, after making an inspection of the Second River, one of the fresh waters of this State, that on the premises owned and occupied by the Edison Storage Battery Company, West Orange, New Jersey, there is polluting material consisting of trade wastes from the manufacture of storage batteries draining and entering into the waters of the said Second River, and also discoloring the water for some miles.

In an endeavor to secure the abatement of all existing pollutions in the fresh waters of this State, this Department desires your cooperation, and we would respectfully request that you take such means as you may deem advisable in order to prevent any further pollution occurring from said premises into any of the fresh waters of this State.

Will you kindly give this matter your immediate attention, and inform this Department upon the completion of the work?

Enclosed you will find a copy of the law relating to the pollution of the fresh waters in this State.

Thanking you in advance for your cooperation, I am,

Very truly yours,

(signed) J. C. PRICE

CGW/MAC

Director

ENCL:

LP

EDISON STORAGE BATTERY COMPANY

MEMORANDUM

September 1st, 1916.

AP-25-661

MR. R. A. BACHMAN:-

In answer to your memo regarding the pollution of the Second River, would say that the following changes will reduce the visible impurities, allowing a dilute solution of sodium sulphate and sodium carbonate to enter the brook.

1. Instead of passing the copper wash water from the cranes in the old crane room over the iron drillings, the sump which holds the iron drillings should be used for precipitating with soda ash and the copper mud pumped to the filter press which is to be installed for similar work from the new crane room.
2. The drainage from the floor in the old crane room should be run into the above sump if possible. There is a large volume of this solution but it is very low in nickel, copper and iron contents.
3. The over-flow from the ribbon machines contains appreciable amounts of nickel, in a form unsuitable for easy recovery, due to the presence of ammonia. The most desirable change would be a solution containing no ammonia salts. The nickel could then be recovered as in the floor plating. Experiments can be started to develop such a solution. The solution as it runs off now, will occasionally give a small yield with soda ash. This treatment may render it immune from further precipitation in the brook. In either case a sump would be required to reduce this source of pollution to a minimum. There is one large sump in this room not being used, except as an overflow from the iron. When this iron recovery system is removed, this sump may become available.
4. The method of removing the so called iron from the sludge by washing, allows a basic sulphate of iron and nickel to flow into the brook. This material ought to bring a good price on the market. A magnetic separation of the nickel from this sludge should be looked into before elaborating a system of settling tanks, filters, etc. All material of any value in the anode sludge boxes would be magnetic and the portion which spoils the contacts between the small particles of nickel would be removed in a dry state in one operation. This non-magnetic material would also have a good nickel value.
5. The overflow from the part plating room, apparently has nothing feasible to recover, consisting mainly of acid. Besides either letting it run in the brook or sewer, the only other outlet, if necessity should arise, would be to build a cesspool to let the most objectionable portions drain through the soil.
6. The outlet from the drain pipe from the second and third floors of the new plating building, should be placed so that it runs into the sump. (This refers to the drain from the copper refining department, and is only used when washing down the floor.)
7. The filter bags underneath the settling tanks for the mud from

EDISON STORAGE BATTERY COMPANY

MEMORANDUM

- 2 -

R. A. Bachman. (Cont'd)

the separating wash are not efficient enough to take care of the large amount of water which occasionally comes down. This causes an overflow of copper mud into the brook. If we are to stop all precipitates from getting into the brook at all times, including the copper and nickel recovery sumps, some changes should be made on the acid bags, and if the proposed increased pumping and filter press facilities do not eliminate all sediments from the brook, an additional de-watering proposition can be taken up if necessity arises.

The losses from this source are very small and any installation would not pay for itself. It should be determined whether brushes on the copper baths would reduce the strain on the recovery plant. Certain mechanical difficulties must be overcome before these brushes could be successful. The proposed substitution of lime for soda ash becomes more difficult if the pollution of the brook is to be considered, and the saving from this change may have to be given up. If the price of soda ash comes down to normal, the use of lime is not so attractive.

Will await your instructions.

Arthur Pedersen

ARTHUR PEDERSEN.

[ATTACHMENT]

November 3d, 1916.
RAB-9-2142

Mr. Pederson:

The State Board of Health is again after me on account of pollution of streams. Will you kindly let me know what progress has been made in order to stop this nuisance. The situation is becoming alarming now and it is necessary for us to take immediate steps to take care of our waste so as not to do any more pollution of streams.

R.A. BACHMAN

[ATTACHMENT]

MEMORANDUM

Mr. R. A. Bachman: *Mr. Cratt*
Here find out what is holding it up
 Nov. 4, 1916
 AP-8-7704
Bachman

In answer to your memorandum regarding the pollution of streams, would say that the stand for the filter press has been erected and we are waiting for the press. Shipment was originally promised on the 25th of October but the latest urgers place the date of shipment on the 18th of November. I have taken up the matter with Mr. Norton and immediate steps will be taken to remedy this condition as much as possible till we get the press.

A. PEDERSEN.
A. Pedersen
 NOV 11 1916

*See our letter to
 Mr. Currey Sep. 1 1916, 1916*

EDISON STORAGE BATTERY CO.

ORANGE, N.J.

EDISON CHEMICAL WORKS DIVISION

SILVER LAKE, N.J. 9-11-16

Mr. Thomas A. Edison
Laboratory
Orange, N. J.

Re: I by U. S. Pat. 1,100,000

OK mm
Meadowcroft
given we can
rece 1000 lbs
month - 40 cents
lb - 4

Dear Mr. Edison:

We received a few days ago a letter from the firm of Stanley Jordan & Company, 116 Broad Street, New York, dated August 22, on which you have made the notation asking whether we can spare any iron for iron by hydrogen.

In reply, would say that we have talked with Mr. Meadowcroft relative to this matter, and have explained that we ought to be able to give over for that purpose 1000# per month, and possibly by another month, we ought to double this, or even do better. We have the new E type furnace running about one week, and are repairing one of the old furnaces, which should be done shortly, and thus placing us in pretty good shape to supply considerable material.

Of course, at the present time, we are making as much iron as possible for the Edison Storage Battery Company, in order to get up our stock. It will depend upon what amount of stock we want to carry, before we can determine how much iron by hydrogen for pharmaceutical purposes we can make.

We enclose herewith letter from above firm.

Yours very truly

Pruder

1711/K
1 Enclosure.

EDISON STORAGE BATTERY CO.

ORANGE, N. J.

Carbolic

EDISON CHEMICAL WORKS DIVISION

SILVER LAKE, N. J. Sept. 22; '16

Mr. Thomas A. Edison
Laboratory
Orange, N. J.

Noted 202

Dear Mr. Edison:

Some days ago we received copy of letter dated September 9; from Mr. Kammerhoff to Mr. Lambert; subject: Consumption of Steam - same referring to measurement of steam used by us and manufactured by the Carbolic Acid Mfg. Division. On this letter was your notation as follows: "Why not settle this thing once for all".

In reply to this memorandum, we submit to you copies of our letters to Mr. Kammerhoff in regard to the proposition. We also return to you the original letter of Mr. Kammerhoff, with your notation; to which is attached copies of the letters that Mr. Kammerhoff has written us. We note that he has not sent any copies of our letters to him. Our letter dated July 3rd goes into the matter quite thoroughly; and explains our position and also what we had done, up to that time, in getting steam consumption and also in getting a meter.

Since July 9, we installed a 3" meter; but we immediately found it too small to measure all the steam we were then using; together with that used by the Phenol, Resin & Wax Division. We immediately ordered a larger mechanism; but owing to various delays, we did not receive this until about September 1, when we immediately installed it; and the meter is now in operation and

measures all the steam we are using, together with the steam used by the Phenol Resin & Wax Division. Each day the meter is read by a representative of Mr. Kammerhoff and our own man; and this morning Mr. Kammerhoff informed me that as far as he could see the meter was operating satisfactorily to him.

He states, however, that the steam meter measuring steam for the Aniline and Phenol Divisions has been out of order for about a month, and on this account, it will be difficult for him to judge the correctness of our meter.

In this connection, would say the steam meter installed is a General Electric meter, and in all probability is extremely accurate, and the readings made by this meter we shall consider accurate and final.

If you read the attached letters which we have written to Mr. Kammerhoff, you will see that the matter of measuring steam was not neglected by us. As explained; we kept a very accurate measurement of the amount of condensed steam, and from this measurement, we made up a statement each month of the amount of steam used. This we submitted to Mr. Kammerhoff and he billed us. We believe that while this method is not absolutely accurate, it was sufficiently so under the circumstances.

In regard to the payment of additional bill of Mr. Kammerhoff, dated July 31, amounting to \$1149.06, we would say that we do not feel justified in passing this until we have a month's reading from the steam meter now installed. We believe that this will show that our calculations for steam consumption were approximately correct, and this bill for additional is in error. However, should the steam meter show that our calculations were less than actual, we

are ready to pass the bill or adjust the matter.

Mr. Kammerhoff, in paragraph 4; infers that we have put off measuring steam because we feel we were using more than we were being billed for, and therefore lessening our charges. This is wrong. We had no such intention at all; and this inference should be corrected at once. It may be Mr. Kammerhoff's idea to put one over on anyone he can, but it is certainly not ours. If this were the case, it would not be likely that we would at present put in a meter when we are using a hundred times more steam than we were in January.

It is very likely from the letter of Mr. Kammerhoff, with his former letters attached, that you might think we had not made any replies, as he very carefully attached his own letters, but ^{practically} says nothing about our replies; nor gives any copies of them.

As soon as we calculate from the steam meter the amount of steam we have consumed and check this against the calculations by the method we have used in the past, we shall take up the matter of payment of the bill of July 31; and try to settle this matter of additional steam consumption.

Trusting the entire matter is explained to your satisfaction; and that we can adjust the matter without any further discussion, I remain,

Yours very truly

JWM:k

Alvin
Division Manager

CC - Messrs. Chas. Edison; S. B. Mambert; C. H. Wilson; H. Musk
and M. Kammerhoff. Clearing House.

September 23rd, 1916.
HAB-9-1152

Mr. Edison:

Regarding the attached letter from the Eagle Penoil Company, addressed to Mr. Hutcheson, and your memorandum on same, I would recommend having a Tube Drawing machine built on the outside, charging the Eagle Penoil Company 25 per cent. profit on same.

In as much as the expense for development work was all borne by you they could consider themselves fortunate in getting it even at this price.

We could give them the approximate estimate of the cost of the machine if you care to have us do it. This would, however, only be approximate, due to the many changes in manufacturing conditions since the last machines were built.

Richard G. Bachman

Bachman gave me the approximate cost which they could get it outside - I guess I will charge 100% extra

EDISON STORAGE BATTERY COMPANY

MEMORANDUM

September 25th, 1916.

RAB-9-1170

Mr. Edison:

Regarding the attached correspondence from the Eagle Pencil Company and your pencil memorandum on same, I beg to inform you that the Tube Drawing machines built at the Laboratory cost the Storage Battery Company \$1,500.00, while the same type machine was built at the Storage Battery Company for \$825.00. I would recommend that you charge the Eagle Pencil Co. \$2,000.00 each, which would be a fair price for one of these machines. This will give you 100% over and above the cost.

Halvin A. Bachman

Meadcroft. Adv to Eagle Pencil Co. that the
price of \$825 is a fair price for a machine
of this type. The Laboratory machine cost \$1,500.00 over
and above the cost. This will give you 100% profit. *GOV*

[ON BACK OF PRECEDING PAGE]

EDISON STORAGE BATTERY COMPANY

MEMORANDUM

Cost of machine made subsidy will
be about \$1450 = I should want
to make 5% to the cost to help pay
for our long ~~and costly~~ expenses
I would recommend that you ~~make~~ the Edison Storage Battery Co. \$3,000.00 each, which
would be a fair price for one of these machines. This will give you 100% over
and above the cost.

Edison Storage Battery Co.

September 26th. 1916.

Eagle Pencil Company,
710 East 14th Street,
New York City.

Attention of Mr. Edwin M. Berolzheimer.

Gentlemen:

Your favor of the 21st instant in regard to tube
seaming machines was received by Mr. Hutchison and handed
to me.

Let me say in reply that the cost of a single machine
of this kind, made outside would be about \$1450.00. I should
want to add 50% to the cost to help pay for our long and cost-
ly experiments.

Yours very truly,

Edison Storage Battery Co.

THOMAS A. EDISON, PRESIDENT
ROBERT L. EDISON, VICE PRESIDENT
W. F. HILLER, SECRETARY
W. H. HAWKSWORTH, TREASURER

THOMAS A. EDISON

ORANGE, N.J.U.S.A. October 26, 1916

CABLE ADDRESS
"EDISON" NEW YORK

IN REPLYING
ADDRESS THE COMPANY
AND REFER TO

Mr. Thomas A. Edison,
West Orange, N. J.

Dear Sir:

At the request of Messrs. Thomas A. Edison and Charles Edison, stockholders of this Company, a special meeting of the stockholders is hereby called to be held at the Company's office, corner of Valley Road and Lakeside Avenue, West Orange, N. J., on Thursday, the 2nd day of November, 1916, at two o'clock P. M.

It is expected that the Board of Directors of this Company will meet at 10:30 A.M. on November 2nd, 1916, to authorize the issuance of bonds of the Company aggregating in amount Two Million Dollars, to be secured by a mortgage to the Fidelity Trust Company of Newark, N. J., Trustee, upon certain property of the Company, the said bonds or the proceeds therefrom to be used for redeeming outstanding bonds of the previous issue not yet paid; to enable the mortgage securing said previous issue of bonds to be discharged, to pay the Company's indebtedness on open account to Mr. Thomas A. Edison in whole or in part; to acquire and pay for in whole or in part certain land, buildings, and equipment now used by the Company; to place the Company upon a better financial basis by converting a part or the whole of its outstanding floating indebtedness into a bonded indebtedness; and to provide funds for such other purposes as the Board of Directors in their discretion may deem proper and advisable.

The principal object of the stockholders meeting hereby called is to take appropriate action with reference to said proposed issue of bonds and with reference to such other acts as the Board of Directors may do at said meeting.

Another object of this stockholders meeting is to counsel and record the authority given certain officers of this Company to enter into written contracts with Mr. Thomas A. Edison and Ford Motor Car Company by resolutions adopted at a stockholders' meeting of this Company held December 10, 1912, and to take such other action as may be necessary or advisable as the result of such rescission and cancellation.

If you do not expect to be present, will you not kindly send me a suitable proxy designating an agent to represent you at the meeting. A form considered suitable for this purpose is enclosed herewith, which, if satisfactory to you, should be dated, signed and witnessed.

Very truly yours,

Arthur Mudd
Secretary.

EDISON STORAGE BATTERY COMPANY

MEMORANDUM

October 27th, 1916.

100-9-2101

Mr. Edison:

Regarding your memorandum of the 27th wherein you ask "How are you getting on with the cell recovering department. I get no reports."

In this connection I beg to inform you we have had considerable troubles in order to get material for the department of recovering active material, which is now being completed and is in operation, but not long enough to give you sufficient data on cost of same. Mr. Mudd has a man in this department and is collecting data on costs of cutting open cells and then from operation to operation until same is recovered and again put back into cells.

Regarding prices on rubber parts plant, I am getting out a detailed report of machinery required for the manufacturing of our rubber parts and will turn same over to Mr. Barry to get prices on same. I would like to make another trip to Trenton before this report is completed. As I told you verbally today that we could not depend on prices given by Stokes Company, in as much as they are running their place in an old fashioned way and have very little data on actual cost. The data that was collected was through some of their bills, on which I understand they added 20% due to increased cost of material at this time. I told them this is not what we are looking for and the next time I go to Trenton I will stop at the Throp Manufacturing Co. who are manufacturers of calendar rolls and rubber machinery.

I will get a fairly good idea of cost on rolls there.

Richard A. Bachman

EDISON STORAGE BATTERY COMPANY

MEMORANDUM

November 20th, 1916.
EJR-23-1476

MR. W. H. MEADOWCROFT:

We are developing a very satisfactory and profitable business in connection with the sale of Storage Batteries for the operation of locomotives used in mine haulage service.

At the present writing the Pittsburgh Coal Company are in the market for twelve 5-ton locomotive and contemplate equipping each with 80 cells of type A-8. The H. C. Fricke Coke Company very shortly will issue specifications calling for eighteen locomotives - battery equipment optional. Should we succeed in getting the Fricke business it would result in the sale of 18 sets of batteries, each containing 80 cells type A-10. Even if we only secure half of the Fricke business and all of the Pittsburgh Coal Company's, the net value of the two orders to us would be \$28,000.00.

There are two men who are in a position to help us to a great extent in securing this business, and they are both staunch admirers of Mr. Edison. If we could secure for them, autographed pictures of Mr. Edison for them, I am very certain that it will help us very materially.

The two men in question are - Mr. Joe Bryan, of the Pittsburgh office of the General Electric Co., and Mr. W. A. Chandler, Electrical Engineer of the H. C. Fricke Coke Co.

E. J. MOES, JR.

*Send Photos
11/21/16*

Mr. Edison

Charles Edison
Dec 3.

Under the plan of permanent Engineering Organization which we are trying to put into effect, the condensite cabinet proposition is not correctly up to Constable whose work is to be almost entirely confined to phono mechanisms. I suggest Simpson for the time being carry on the condensite work.

Charles Edison.

All right

708

Dec 3

Mr. Hutchison

Under the plan of permanent Eng. Organization which we are trying to put into effect the condensite cabinet proposition is not correctly up to Constable whose work is to be almost entirely confined to phono mechanisms.

I suggest Simpson, for the time being, carry on this work alone.

Charles Edison.

~~Simpson is already making up with make it his to get someone lined up~~
MOR

Charles:

There is no doubt but that there is a lot of room for improvement in the Eng. Dept. But as long as Sam Parsons runs things in the works I don't see how I can go on & accomplish anything there. I see myself waste going on all the time. If I mention it, Chas. or somebody tells me E. & instruct me to keep my hands off it. I won't get through that a half dozen times and then come the fatality of further efforts.

Sam Batley is going to have a damn right frustration this Eng. Dept. Pretty soon we will have lost all our good men.

Samille quits Saturday. H. H. Smith is said to be about to

quit. The funny part is, they all almost doubt that Salomon's absence. Parson Jones, whom the O.M. didn't like much, & who got out in due course, is now getting 65th a week as asst. ch. Eng. of a vehicle Mfg. Co. (electric tractors &c) somewhere in Ohio. Samille gets 40th a week plus moving expenses to Cleveland. Chrysler is making good on the job I got him for 50th a week in Juico.

If I had a good practical assistant - a man who knows how to handle & handle men, I could cover much ground. But I haven't got one man - Norton - & he is head over heels in submarine battery

As a matter of fact, I pay my
own office man over my
own pocket. Mr. E. let
him go last summer with
all the rest, & I have been
paying him his 25⁰⁰ a
month ever since. The
most of his time he spends
in C. business.

But he's all right. If
Mr. E. doesn't think the man
who is trying to handle
the C. end of all his cos.
and the Sat. is ~~not~~
entitled to an office assist-
ant to keep some sort of order
over the chaos, I am perfectly
able & willing to pay him
myself. Aside from
Warner & Conslater, ~~there~~
and Kennedy, there isn't

a real technical man left
in the Sat.

Lulu is a good man. Hummel &
me. But he is slower than hell
and can't be hurried. The M.
has got Halpin so swamped
with tests of all kinds he
hasn't the actual time to
do any one thing well & expen-
ditiously.

I am running on an average
of from 35 to 75 letters a day.
I am not minutes, processes
I am investigating in the works etc.
I am handling all the
Mining Sample tests, buying &
for some camp major & make
bulks that will last over 170
days. Looks as if the mining

lamp will never come out, just
because the lamp mags
can't make small bulbs
that will start it. But
characteristic voltage & curve.

I want to go on the matter
with you, because something
more is done to make ready
for the work that is coming
back up here as result of
no more experimenting in
the works. Then they took
practically all the men we
find out by the day, & carried
on the work that was in
progress up here. I'm that
the work is coming back, where
all the men to do it.

I am here very anxious to
make in an assistant who

can take a lot of the load
off. For that man must
have a wide experience
with men & affairs, & he
must tell things up to
my superior. For
instance, our dear friend
Cassidy, is thoroughly
disturbed all on Sat. Eve,
from the top down. He
simply doesn't know how to
handle them. Neither did I
when I came, & I was about
10 p.m. or so. I don't know Cassidy.
It is a damn queer point
and about 10 clowns. All
fighting among themselves and
the O.M. losing the money.
We know any Eng. Dept
anywhere. In fact my little
system of any kind. I am

the men on jobs in the
works put down their own
views & nobody knows if
it is right.

Manbar will correct
much of that. For example
how many years it has been
going on already!

I want you to tell Jimmie
that you can come to & talk with
me as you would a brother. I
am not "offendable" and have
no false pride. I am anxious to
do all I can to help that
formed old man. Incidentally
I'll make all the money I
can communally use out
of the Battery. Box smuggling
has got to be done thus or
the whole organization will

go to hell in a hand basket.
It is no sitting, staring
letter of discomfiture and
suspicion - anyone seems to be
suspicious of the other. I am
persona grata there and have
done much to pacify matters
from time to time.

In spite of all sales times
Navy spur or the Sudan I
continue to see nothing reports
in the film describing it.
For what can I do when I
have not wanted our there,
and any suggestions made
are construed as fault finding
for trouble making.

I'll tell you, my, Jesus
Christ would have a hard time
trying to get a lot of these

mess backs out of B.C.
ways + methods. It is a
sure enough He got the
man do a little.

At one time it was rumored
that I was so closely con-
tacted with the Govt. as to
be here to spy on fraudulent
use of the mails! I wonder
why anyone can think
the mails were being used
for such purposes? I'm
sure the business doesn't use
it as such.

Why can't we get together
at my house evenings about
once a week or so and
go over matters. You have
buddy ideas, & I always
find a talk with you is
producing good results.

I'm nagging under a
pretty heavy load, Charles,
and really need your
help.

It is now 2 am. I
got up + went to work at
5 am. yesterday, so
this is the 23rd hour
of continued activity
with 1 city & 1 Newark
visit for my concerns
New York. For the P.M.
thinks I am loafing in the
lot for heaven I didn't
report a failure of an
experiment I tried a week
ago. the condenser
cicking. I'll admit I
can rectify the trouble
in a short time, but I haven't

have my job for 3 days
because of a slight bilious
attack. I have also sent
in Specs + his material
a million dollars worth of
batteries + virus + frozen
germs during the
past 10 days.

I'm getting sleepy, so
am now. I must keep
and off in the city on
the 7th am train. Be
back near noon.
Wonders got 2 eggs + laid
in Bunting. ^{hutch}

New York Herald
Sept 31 1916

NEW YORK ID

REPORT ASSAILS EDISON BATTERIES FOR SUBMARINES

Navy Department Receives
Findings on the B-2 Ex-
plosion Here.

MINORITY DISSENTS
FROM CONCLUSIONS

Contracts for the New Vair Vessels
Virtually Are Agreed
Upon.

WASHINGTON, D. C., September 30.—The majority and minority reports of the Navy board appointed to investigate the explosion of the B-2 at New York, forwarded to Congress by Secretary Daniels, show a wide divergence of opinion regarding the efficiency of the Edison battery, with which the B-2 was equipped.

Lieutenant C. M. Stanley, U. S. N., Mr. Wheeler and Cecil V. Johnson dissent in a minority recommendation that no Edison battery be installed in any of our submarines until further tests have shown that their disadvantages have been overcome. Captain George W. Buel, senior member of the board, and lieutenant member of the New York Navy Yard, filed a dissenting report stating: "I believe that of the three types of battery tested by the board, the Edison battery is the best selected for use in submarines."

A full explanation of the reasons behind each report is included in the correspondence sent to Congress. In every respect noted, except in generation of electricity, the majority report finds the advantages in its with lead type cells as opposed to the Edison type.

Captain Buel notes that an internal explosion in a lead cell at the New York yard blew off the top of the condenser, while the Edison cell condenser was not damaged by a similar explosion. He points out that "it is recognized that all storage batteries are dangerous and inefficient, but they are the only means, so far as I know, of furnishing propulsive power when submerged."

A drastic proposal advanced to furnish authority under which private manufacturers of alkaline cells would be compelled to give preference to navy work, has been submitted by Secretary Daniels to the House Naval Appropriation bill, consideration of which will be resumed next week.

Officials of the three shipbuilding companies which submitted proposals to construct battery rooms virtually have reached an agreement with the Navy Department as to form of contract to govern the building of the vessels on a cash and "percentage" basis. The Navy Department is authorized at the last meeting of Congress probably will be built at actual cost, plus a specific percentage.

Present indications are that the awards will be made early next month. The Newport Navy Shipbuilding and Reprofit Company, the Fore River Shipbuilding Company of Quincy, Mass.; the Union Iron Works of San Francisco, and probably William Cramp & Sons, of Philadelphia, getting contracts for one hull order each.

[ATTACHMENT]

Chicago Tribune
Oct 6 1916

RE 6, 1916.

NAVY ROW OVER THOS. A. EDISON

Friction Crops Up Between
Daniels and Officers on
Submarine Batteries.

WORK IS CRITICIZED.

BY A STAFF CORRESPONDENT.

Washington, D. C., Oct. 5.—(Special.)—A serious conflict has arisen between Secretary of the Navy Daniels and officers of the navy over the use of Edison batteries in submarines now being constructed for the government.

Mr. Daniels, who is a warm friend of Thomas A. Edison, is insisting that the navy use Edison batteries.

Officers in charge of the construction of the submarines assert that the batteries are dangerous and should not be used under any circumstances, as they are now made, especially as they give out too much hydrogen gas while the vessels are submerged.

Edison Work Is Criticized.

It was learned on high authority today that the naval officers have their opposition to the Edison batteries on reports made by two boards of investigation.

Both of these boards seemed to inquire into the cause of the explosion in the submarine B-2 at the Brooklyn navy yard on Jan. 13 last, resulting in the death of four men and injury to two others, returned a finding that the accident was due to the Edison batteries. This report did not reach the public.

Mr. Daniels appointed a second board of officers to make a general inquiry into the merits of various batteries which were being offered the department for installation in submarines then building and in process. This board also returned a finding against the Edison battery and again it was not published.

Drugs Rejection of Batteries.

Meanwhile, however, according to prominent officials of the department, Mr. Daniels insisted on having the contract for batteries for the new submarines to be constructed at Portsmouth and at the Edison company.

Recently, it is said, officers in charge of the construction of the ships were assigned to test the batteries purchased for it and they promptly voted their rejection. Their vote to the government was between \$25,000 and \$30,000. Mr. Daniels has declined to reject them.

The department began to use Edison batteries in the construction of others; it was said today, following the explosion on the P-4, while it was submerged in Hambleton harbor more than six months ago.

Mr. Edison and Miller Reese Hays, his personal representative, commented on that explosion and blamed the loss of the vessel on defective batteries, which permitted the escape of a large quantity of hydrogen gas.

Mr. Hays, according to officials of the department, asserted that the use of Edison batteries would be away with this danger of escaping gas.

EDISON STORAGE BATTERY COMPANY

MEMORANDUM

*Mr. Edison
saw this 4/3/17*

April 2nd, 1917.
BAB-9-434

Mr. Edison:

Mr. Meadowcroft asked me to report to you on the progress being made on rejuvinating of cells. I am enclosing herewith report of the number of cells opened and just what work has been done on the active material. We had quite some difficulty in the various processes naturally, but the last one we ran up against is the acid treatment of flake, but we found a practical way of doing this and this arrangement will be ready in about two days.

85 lbs. of O. K. flake was sent to Loading Department
500 " of Flake on hand completed except screening
200 " of Flake will be secured from 500 lbs. unscreened flake.
710 " of Flake has passed through the plant.
710 lbs. Flake is equivalent to 2151 A-4 cells.

We made up 103 A-4 cells and tested same and found them to be higher than rated capacity. They were sent out and now being used in active service.

103 A-4 cells were made up and tested here. So far way above rated capacity. One of the original A-4 cells developed a short circuit. This, however, was due to mechanical defect.

The tube department reports as follows:

Condemned cells in stock; (disassembled)

A-4	3788	B-1	270
A-6	2241	B-2	280
A-8	1748	B-4	198
A10	894	B-6	14
A12	1737	C14	15
G-4	2	M-8	541

Tubes ready to split - 561,770 tubes or 4948 A-4 equivalent cells

No. of cells cut up to date -

A-4	12041
A-6	9690
A-8	3010
A12	1648 or 4,484,820 tubes

In addition to the above we have shipped 19,829 lbs. of iron and 6415 lbs. of Nickel Oxide to Silver Lake to be recovered. Silver Lake is recovering enough material to make up 1,000 A-4 equivalents for rejuv. purpose or any other test you may decide to put through.

Mr. Mudd is now working on cost of rejuvinating cells and hopes to have this in shape for you within the next two or three days.

Robert A. Bachman

BATTERY STORAGE

April 3, 1917.

Messrs. Edison, Baolman, Thompson, H. H. Smith, Acker, Mitchell.

I am enclosing copy of letter received from the Navy Department, in reply to my letter asking why the Edison Storage Battery had been disapproved for use with portable electric hand lanterns in the United States Navy.

M. R. HUTCHISON.

Match = I don't believe this = Can you get some as we can verify it. Then we can proceed.
E. L. Lunn

Hutch - Can you get the tests on lead battery lamps

No Sir. They are confidential to all except the manufacturers who submitted them. I understand Mr. Baolman is expressing they have a fault that will cause failure in 6 months in terms of practically constant maintenance. Such is the nature of a mine. MRM

[ENCLOSURE]

COPY

219806-675-8-L

NAVY DEPARTMENT

BUREAU OF STEAM ENGINEERING

Washington, D. C., March 31, 1917.

Gentlemen:

1. Replying to your letter of March 26, 1917, regarding the reasons the Edison alkaline storage battery has been disapproved for ~~Edison~~ with portable electric hand lantern, the Bureau quotes as follows from New York Yard tests on portable hand lanterns fitted with batteries of your manufacture:

"3. Tests.

Seven batteries were fully charged and readings taken of the candlepower of a 2.5 volt lamp illuminated from this battery, and mounted in a miner's cap reflector, furnished with the batteries. The life of this newly charged battery was recorded as a basis to determine the relative deterioration of the other six batteries. The other six batteries were then placed in a compartment where the temperature changes were very slight, and candlepower readings taken on 1 battery each month until the seven cells were discharged. x x x x. At the end of the fourth month, the life of the battery was only about 2-1/2 hours, so at this time the remaining three cells were discharged as it was considered of no value to extend the test further.

4. Summary.

From the result of the test and observation of the battery, it is found that the end of the two months, ~~loss~~ practically all their useful charge. The life and candlepower at the end of this period is negligible.

5. Conclusion.

In view of the above summary it is considered that this type of battery submitted is unsuitable for Naval service, as it is desired to obtain a portable safety lantern of the primary or secondary type which will give considerable useful light after standing idle for 6 months or more."

2. The following is quoted from another test of Edison batteries and portable electric lantern:

"(b) The battery used is a serious drawback. This type of battery, in addition to being not leakproof, shows very poor characteristics as to life, both for a single charge and for shelf deterioration. Although no data is available for a

[ENCLOSURE]

Copy - 2 -

period of 3 and 6 months, the set at present on test shows a life of only 3 hours after 2 months standing, compared to 8 hours continuous burning, and an additional 4 hours after 15 hours recuperation, starting with the battery fully charged. It is thought that in order to make this battery leakproof, the manufacturer will have to cut down on the size of the plates, thus further impairing the life.

7. Conclusion.

As there is no safety device, and owing to the poor characteristics of the battery, it is considered that this lantern as it stands is not up to the present standard of safety hand lantern for use in Naval Service."

3. In view of the requirements of the Service that a portable electric hand lantern should give considerable useful light after standing idle for six months or more, and in view of the fact that it is necessary to have a non-spillable battery, the Bureau concurs with the recommendations of the Navy Yard, New York, which were based on tests, and disapproves the Edison alkaline storage battery for use with portable electric hand lantern.

Very respectfully,

(Signed) R. S. Griffen,

Engineer-in-Chief, U.S.N.,
Chief of Bureau.

Edison Storage Battery Co.
Orange, N. J.

EDISON STORAGE BATTERY COMPANY
MEMORANDUM

Charles E. -

We should now take up & discuss
May 10th, 1917
RAB-9-545

My dear Mr. Edison:

Reventing system - using only Rejuvenated cells
This is to inform you that this coming week we will include

in our weekly schedule the assembling of 300 rejuvenated cells.

The first 300 will be assembled of entirely rejuvenated material, including cans, covers, grids, rubber parts and active material.

It is to be regretted that we cannot use these cells for replacement purposes on account of double mountings in the covers, and they can only be used for reventing purposes.

This system can be built up to be a great one for its service as well as to do -
The first lot will be A-C cells. We will be in position

from now on to put at least that number on our weekly schedule and can materially increase this number as we go on.

I am glad to state that the 100 cells we put in service at the present time show higher rated capacity than new cells we made up and so far they have shown no indications of trouble. They have been in service from 7 to 8 months.

OO Messrs. Chas. Edison
S.B. Mumhart
J.V. Miller
H.G. Thompson*Bachman**See me -*


EDISON STORAGE BATTERY COMPANY
MEMORANDUM

L

May 21, 1917
LL-1-2012

Mr. Meadowcroft:
Laboratory

Regarding the subject of Laboratory letter
heads and stationery for my use.

As explained to you, it has been
Dr. Hutchison's custom to write to the Navy Department and the
officers to whom he would address any communications concerning
submarine batteries, on Edison Laboratory paper, the idea being
that these communications were really of a scientific character,
and to remove as far as possible, the idea of commercialism.

To me the idea seems a good one, and for
communication with any department of the Navy, suggestions and
statements will receive more consideration if they proceed from
a scientific laboratory rather than from the offices of a commercial
organization having something to sell.

In this connection it should be observed that
if I am to produce the best and most results for the Storage Battery
Company in outside expert matters, it will be necessary for the
relation of professional advisor and client to be strictly maintained.
If the general public should come to view me as merely an employee
of the Edison Storage Battery Co., such influence as I may now
possess as an independent Consulting Engineer, would disappear, and
the value of my services as an expert in the court, or in negotiations
with the Navy Department would be practically nullified. Undoubtedly
this is obvious to you without my drawing your attention to it, but
since the question of the use of Laboratory stationery has arisen, I
am taking this opportunity to mention this subject as one of the
collateral reasons which induced my first request for it. Personally,
it makes no difference to me whether or not it is desired that I
confine my communications to the limitations of the Storage Battery
Company. My suggestions are simply for what I consider to be the
most efficient means of using my services in behalf of the Company.

LAMAR LYNDOX.

Lamar Lyndon

OKTAE

Telegram

June 17, 1917

Acheson Smith

Acheson Graphite Co

Niagara Falls, N.Y.

Dr. Acheson has given me
contents your telegram. Please
express ~~the~~ 12 electrodes back by
sea by twelve. I will try them.
Mark package attention Macdonald
Thos. A. Edison

Sent N.Y. 4 PM
6/17/17 Wm

\$500.

EDISON STORAGE BATTERY COMPANY
MEMORANDUM

July 23rd, 1917.

Mr. R. A. Bachman:

Several months ago the loading weight was raised from .0038 - .0042 to .0040 - .0045 upon the recommendation of H. H. Smith. The average loading weight since the first of May has been .0041. To meet the new standard the average should be .0042 as against the old standard of .0040. It is evident that the average has not been raised as far as it should be. Not only has the average failed to meet the new requirements, but on 19 days out of 58, or practically one third of the time we have had loading weights between .0038 and .0040 which was considered good practice only a few months ago.

In order to eliminate the readings under .0040 and bring the average still higher the standard plating weight should be changed. The standard weight for 125 layers is 17 pounds, 8 ounces for a loading weight of .0040. In order to bring the average up to .0042 the increased weight required can be calculated by proportion. This figures out to be 18 pounds, 4 ounces. Since Mr. Poppa has requested me to get your approval before he will make this change, will you kindly authorize Mr. Poppa to change the standard plating weight from 17 pounds 8 ounces to 18 pounds 4 ounces?

A. Pedersen
A. PEDERSEN.

CC - Messrs. Monahan, Weed and Poppa.

1000-20417

OFFICE OF FIRST VICE-PRESIDENT AND GENERAL MANAGER

MEMORANDUM FOR RAS-9-791

FUNCTION

SUBJECT Loading weights;

July 24th, 1917

Mr. D. R. Pederson;

Replying to your memorandum of the 23rd calling attention to the loading weights and recommending bringing the average standard plating weights for 125 layers, 17 lbs. 8 oz. for loading weights to 16 lbs. 4 oz.

There is a standing memorandum in the factory that no changes dare be made in any manufacturing unless first approved by either T. A. Edison or myself. I am very glad indeed that no changes have been made without my authority. This would be serious, and wish therefore, Mr. Pederson, you would make no changes in plating or any other manufacturing changes from the standards given unless they have either the approval of Mr. Edison or myself.

It is quite evident that your loading weight is entirely due to the hydrate and not to the flake. If your flake is constant; that is, the physical quality of the flake is constant, then I can see no reason why changes should be made in the weight of same. Heavier flake is of no benefit to the tubes. What we require is more layers in the tubes, not heavier flake. In order to get more layers it is necessary to bring the hydrate to our former standard or get the flake more curly, if same is not as it was in former days when the loading weights were higher than at present. This is something that should be investigated, as it is imperative we must get more flake in the tubes - there is no question about this.

R. A. BACHMAN

CC H. Smith
Memorandum
Wood
Rogge

FILE COPY

FORM 100 (REVISED 12-15)

3950

REFERENCE TO FINANCIAL EXECUTIVE'S MEMORANDUM NO.

3950

DATE Aug. 29, 1917.

FUNCTION IN QUESTION Edison Storage Battery Co.

SUBJECT Audit of Statement for Income Tax Feb. 28, 1917.

EFFECTIVE As soon as possible.

FOLLOW UP BY Secretarial Service Dept.

10-

Mr. S. B. Lambert,
Vice President and
Financial Executive.

Standard Audit of Income Tax Statement has
been made in the above named function for the fiscal year ended
February 28, 1917.

SCOPE OF AUDIT:

This audit comprises the verification of
the detail making up the following item:

NET INCOME (as per Income Tax Report) \$324,743.28

REPORT ON AUDIT:

Our report on this audit will be found on
the following pages.

COPIES TO

MR. S. B. LAMBERT (4)

Messrs. Chas. Edison, R.A. Boehman, H.M. Bonstead.

COPIES OF THIS REPLY SHOULD BE SENT TO ALL PARTIES RECEIVING THE ORIGINAL, INCLUDING THE COPIES TO THE FINANCIAL EXECUTIVE'S OFFICE

We have thoroughly checked all the items supporting the above amount as shown on the Income Tax Statement. The following is a reconciliation of the amount with the Profit & Loss Statement as shown by the books of the Edison Storage Battery Co.

NET INCOME (as per books) \$ 189304.66
(Feb'y. 28, 1917)

Add:

Charges Not Deductible

1. Writing off Darby Mine	\$ 15001.52	
2. Bad Debts: Reserve	30825.85	
3. Accrued Income Tax	9592.65	
4. " Excise Tax	762.66	
5. " Capital Stock Tax	1200.00	
6. " Excess Profit Tax	1137.66	
7. Reserve Slow Moving & Obsolete Stock	50000.00	
8. " Second Class Coils	16265.52	
9. " Self Insurance	<u>10279.74</u>	
		\$ 135438.62

Net Income (as per Income Tax Statement) \$ 324743.28

1. DARBY MINE \$ 15001.52

This amount represents a loss on the investment in the Darby Mine. In accordance with the ruling of the Income Tax Law, this amount is not allowed as a deduction for the reason that it is not a current loss having stood on the books for a period of over 10 years.

2. BAD DEBTS RESERVE \$ 30825.85

The Reserve for Bad and Doubtful accounts created during the year was in excess of the actual loss written off to the extent of the above amount. The following is an analysis of the items making up the amount:

<u>Balance March 1, 1916</u>	\$ 16820.56
<u>Reserves during period</u>	<u>97240.94</u>
	114061.50

<u>Less:</u>	
Actual Losses charged to the account	\$ 66143.87
Adjustment of Reserve <u>871.52</u>	<u>56715.09</u>

Balance Feb'y. 28, 1917.	\$ 47346.41
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Balance Mar. 1, 1916.	<u>16820.56</u>
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<u>Excess in A/c Not Deductible</u>	<u>\$ 30825.85</u>
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3. ACCUMULATED INCOME TAX

\$ 9592.65

The Reserve set up during the year for Government Income Tax was in excess of the actual charges by the above amount. This amount is accounted for as follows:

<u>Reserves</u>		
September		\$ 2523.92
October		933.72
November		5465.45
19 February	\$ 7361.60	
"	<u>2221.06</u>	<u>9592.65</u>
		18615.92
<u>Less: Charges</u>		
January 1916	3604.04	
February "	<u>5319.23</u>	<u>8923.27</u>
		\$ 9592.65

4. ACCUMULATED MUNITIONS TAX

\$ 752.68

This amount was set up during the year to provide for a tax on munitions. As no actual charges were made to the account the entire amount is not deductible.

5. ACCUMULATED CAPITAL STOCK TAX

\$ 1200.00

This amount was set up under date of Feb. 28, 1917 to accrue the tax on the Capital Stock for the year. We find a voucher was put through in February for \$785.50 in favor of Chas. P. Duffy, Collector of Taxes and charged to the above-mentioned account, the actual payment however was not made until April 1917.

6. ACCUMULATED EXCESS PROFIT TAX

\$ 1137.56

This amount was set up under date of 2/28/17 to cover taxes on excess profits for the month of January & February 1917. No charges were made to the account during the year, therefore the amount is not deductible.

7. RESERVE FOR SLOW MOVING & OBSOLETE STOCK

\$ 50000.00

The above amount was set up under date of February 28, 1917 to cover losses on material and supplies to be determined obsolete or of no value. As no actual charges for such losses were made during the period, the full amount becomes an item not deductible in the report.

-4-

8. RESERVE FOR SECOND CLASS OBLIGATIONS \$ 16253.62

This reserve represents an estimated loss in value on second class calls the actual loss yet to be determined.

9. SELF INSURANCE RESERVE \$ 10974.74

As no actual loss has been charged against this reserve the full amount is not deductible.

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Approved:
J. W. Robinson,
Auditor.



Auditing Service Department,
Thomas A. Edison Interests.

J. W. Revere

Battery - Storage

November 6th, 1917.
HBT-2-8202.

Mr. Thomas A. Edison, Pres.,
Edison Storage Battery Co.

Reviewing the past twelve months' business of the Battery Company it is to be noted that our sales in A4 equivalents per day show a marked increase over the previous twelve months reported to you a year ago today.

At the beginning of our fiscal year, March 1st, 1917, the Selling Division of this Company undertook to sell an average of 1500 A4 equivalents per day, and while the sales have not averaged this amount to date, we have every reason to believe before the close of that fiscal year we will have sold at least 450,000 A4 equivalents, and have realized our expectations.

Since report to you a year ago we have departmentalized our Selling Division, placing each Department in the hands of a man experienced in that particular activity over which he has jurisdiction, and it is hoped that by this specialization, together with additional salesmen which we will add from time to time, that we can be assured of a gradually increasing business from year to year.

The sale of our product for use in Industrial trucks and tractors is today the greater part of our business and this is due to the requirements of this apparatus by the Industrial Manufacturers of the country together with Government requirements for use abroad. It is interesting to note that the two largest manufacturers of this type of vehicle, namely, the Automatic Transportation Company of Buffalo and the Ellwell - Parker Company of Cleveland, who will during this calendar year sell respectively approximately 2500 and 1800 trucks, are selling not less than 95% of their output equipped with our product. We have also been enabled during the past year to win to our ways of thinking other manufacturers who are selling not less than 75% of their equipment with our product, and it is estimated that not less than 85% of all the Industrial trucks and tractors sold throughout the United States are equipped with Edison Batteries.

The Commercial Street Truck business has not been particularly active during the past year owing to the fact that the manufacturers in some instances have been inactive in the sale of their product and seem to be content with manufacturing a limited number of trucks per year when it would seem that by increased sales and manufacturing effort they could easily double their output. We have however, maintained our average in this respect and have sold our product for at least 50% of all commercial street trucks manufactured. We are encouraging increased activity on our part by direct advertising campaigns and hope that due to the opportunity which seems to be nearly here owing to the consumption of gasoline trucks by the Government, that the Commercial Street Truck Manufacturers will avail themselves of the opportunity which has not been presented to them before for many years.

We undertook a little over a year ago the rental of one type of our battery in connection with a Commercial Street Truck in the effort to place more trucks on the streets, and I have no hesitancy in saying that this experiment has proven without question a doubt that this method of exploitation of the Commercial Street Truck has produced marked results. It has encouraged at least one manufacturer through whom we rented our product to undertake to build a line of trucks from 1,000 lb. to 5 tons capacity.

It is with a great deal of pleasure that I wish to inform you that the American Express Co., who until last year had not purchased any of our product are fast realizing that Edison Batteries are best for their service and are slowly, but surely, giving us the majority of their business; and it is expected that during the next year that we will be able to replace a great many of the lead batteries with Edison which they are now using in approximately 600 trucks.

The Railroad Business -- particularly that in the car lighting equipment-- has not been as great as in former years owing to the almost prohibitive cost of steel passenger equipment; and for the last six months practically only four roads in this country have purchased any battery equipment for car lighting to speak of. However, we try have purchased in this field by contracts with the various railroad companies - many are protected in this field by contracts with the various railroad companies - many of which contracts call for the exclusive use of our batteries - and it is expected that within the next year the Railroad Companies will of necessity have to purchase considerable new equipment; and when they do we are assured of this business.

It will be particularly gratifying to you, I think, to learn that the Edison Battery is practically standard for car lighting on the steam roads of this country.

In the Signal business we have received our share, or proportion, although this is far below what we have received in former years, due, practically, to the abandonment of new signal installations by the Railroad Companies throughout the country. They are only purchasing that which is actually required to maintain their present equipment.

We have in service on the Interborough Rapid Transit Company some 30,000 Edison cells, and on the Brooklyn Rapid Transit some 12,000 cells -- all of which are used to operate the multiple unit control auxiliary lighting and Marker lights. On these two roads the Edison Battery is standard and for the past year they have bought nothing but our product.

Our House Lighting Department have shown a marked increase over last year and with one or two manufacturers - competitors of the Delco System - endeavoring to build up their Organization I feel quite sure that the coming year will show a marked increased activity in this field.

Our Mine Locomotive business is particularly gratifying when it is noted that up to last year we had not sold altogether 200 equipments as compared with at least 400-- most of which have been sold to date--- but all of which we will sell before the expiration of our fiscal year.

Our Specialties Department shows an increased activity and it is expected that this Department will greatly increase its sales through the balance of this year and during our next fiscal year.

Beginning with March 1st, 1918 the Selling Division is going to undertake to sell during that fiscal year not less than 600,000 A4 equivalents.

It is regrettable to note, however, that our net income is not increasing as rapidly as it should with the increased volume of business, but this is due as you well know to the greatly increased cost of raw material and labor in manufacturing, as well as the necessary increases in selling expense due to increase of salaries.

I feel very optimistic, however, over the coming year and feel that our expectations in our sales will be realized unless the general business of the country falls off very considerably.

We are perfecting our organization and adding salesmen from time to time as conditions warrant and I have every reason to believe that our next year's business will show the increase which the Selling Division obligates itself to dispose of.

Respectfully submitted,
H.G. Thompson.

Battery Storage

November 6th, 1917.

To the Stockholders of Edison Storage Battery Co.,
Mr. Thomas A. Edison, President,
Orange, New Jersey.

Gentlemen:

I herewith beg to submit my report on general conditions.

During the past year we assembled 347,801 cells (A-4 Equivalents)
made up as follows:

ACTUAL CELLS.

A-3	225	B1H	26171	G11H	480
A-4	31026	B-2	13854	G14	1352
A4H	12918	B2H	8554	J-3	513
A-5	3228	B-4	23069	J-4	800
A5H	470	B4H	32960	J-5	150
A-6	54471	B-5	3	J-6	172
A6H	7349	B-6	9114	J-7	35
A-8	24770	B6H	8238	M-3	55694
A8H	9025	G-4	20144	M20	8529
A10	4554	G-5	839	M20-3	2353
A10H	575	G-6	3642	M20-12	150
A12	7379	G-7	1935	M20-13	200
A12H	541	G-9	9127	G5X	220
		G11	6653	W-1	17270

The monthly assembly and shipments in A-4 equivalents since
November 1st, 1915, have been as follows:

MONTH	ASSEMBLY	SHIPMENTS.
November, 1915	18,198	15,325
December	21,369	20,212
January, 1916.	19,261	16,462
February	17,858	14,100
March	21,250	21,815
April	20,502	25,485
May	23,938	21,513
June	25,754	20,402
July	19,028	21,502
August	26,052	22,820
September	27,767	22,778
October	33,764	25,184
November	31,233	29,351
December	33,682	32,002
January, 1917	36,365	35,350
February	24,824	29,171
March	31,952	24,779
April	30,930	27,118
May	28,957	27,238
June	27,528	16,970
July	19,318	29,948
August	25,525	27,752
September	26,132	34,747
October	33,886	35,245

Our production schedule at the present time is 9,000 cells per week, and we have sufficient orders ahead (Approximately 100,000 cells, A-4 Equivalent) to warrant our keeping production up to at least this point for months to come, which will help to keep down cost to a minimum so far as overhead expense is concerned.

Both material and labor have increased during the past year. The payroll per man has increased 15% and we have been handicapped by a labor turnover of 15% per month. In addition to this we have had several interruptions of schedules due to lack of sales and also lack of iron oxide, which the Chemical Works were unable to produce for lack of raw materials. This has added materially to the labor cost per A-4 cell base. In spite of the above condition the cost of labor per cell, based on preliminary figures for September 1917, is only 6% higher than a year ago. To accomplish this we have put in improved machinery in practically all departments, and are systematically making further improvements along these lines all the time. In order to offset the increased cost of labor and material, the list price of all A & B types were increased 10% November 1st.

Edison Steel Corp. It was decided in 1916 to install a rolling mill for the manufacture of our own ribbon steel for both negative and positive elements. The order was placed for the entire rolling mill equipment with Blake & Johnson of Waterbury, Connecticut, and the motors were ordered from Crocker-Wheeler Co., Amper, N.J. The motors were received during September of this year and the first shipment of rolls was received November 6th; this shipment consisted of four 8" rolls; the balance of the equipment is to be shipped approximately November 15th. The foundations for same are completed.

In order to effect a lower service cost for the Edison Storage Battery Company and other Edison Interests at Orange, it was decided to take over the entire Trucking Service Department, for the Edison Affiliated Interests at Orange, putting same under one management thus effecting a materially lower cartage cost for all concerned.

It was also decided to take over the Power Service for all Edison Interests at Orange and Silver Lake, putting same under one management, for the purpose of getting lower rates on purchases of current, and coal, thereby giving the Edison Storage Battery Company and other Edison Interests a lower power cost. Both the Trucking Service and Company, each under separate division managers. In order to give uniform service to the Power Service Division and have the service flexible, it was decided to purchase an additional 1,000 KW. generator, which generator was received the latter part of October and is now being installed. On account of the additional amount of current purchased over our bus here, we are now able to buy current at a minimum cost from the Public Service Corporation.

The amount of insurance has been increased from \$895,000.00 to approximately \$2,500,000.00 which has made an increase in premiums of approximately \$40,000.00. The rates, however, have been materially reduced due to the elimination of fire hazards, the schedule rating March 1st, 1916 being \$2.55 per \$100.00 and March 1st, 1917 \$1.65 per \$100.00. Since this time we have made several further improvements which are now awaiting official action on the part of the Schedule Rating Bureau, and further reductions are being made all the time as fast as the improvements are effected.

In noting the financial statement for the last six months, the following items should be taken into consideration:

PROFITS SIX MONTHS August 31, 1917.

1st quarter		
Profits as shown on books	\$74,991.20	\$113,900.00
Less: Adjustments made in		
2nd quarter applicable to first	18,000.00	
	<u>\$56,991.20</u>	
2nd quarter		
Profits as shown on books	\$38,908.80	
Plus Adjustments made in		
2nd quarter applicable to first	18,000.00	
	<u>\$56,908.80</u>	

Percent of profit to capital invested $6\frac{1}{2}\%$ per year.

The following items tend to materially lessen the profits for this period.

<u>RESEARCH.</u>	\$ 22,000.00	
Increase over preceeding 6 months		5,900.00
<u>IDLE EQUIPMENT.</u>	59,000.00	
Increase over preceeding 6 months		
above figures cover interest, depreciation, maintenance, taxes, insurance		
do.		26,000.00
<u>BOND INTEREST.</u>		
Interest accrued on bonds Valued at \$2,000,000.00		
instead of \$800,000.00 - the value of the old issue.		
Increased in interest paid for six months		35,000.00
<u>FEDERAL INCOME & WAR TAXES</u>		
Increase in normal income tax rate from 2% to 6%		3,500.00
Excess profits tax 8% to 20%		4,300.00
<u>FIRE INSURANCE.</u>		
Increase in insurance schedules from		
\$865,000.00 to approximately \$2,500,000.00		
Increase in premiums for 6 months		20,000.00
<u>INTEREST AND Discounts on Bank Loans.</u>		12,018.35

^Respectfully submitted,

ROBERT A. BACHMAN,
~~1st~~ Vice President and
 General Manager.

Edison Storage Battery Co.

CHARLES EDISON
EDISON
OF THE HOUSE

THOMAS A. EDISON

ORANGE, N.J., U.S.A.

OFFICE OF
VICE-PRESIDENT AND FINANCIAL EXECUTIVE

THOMAS A. EDISON
PRESIDENT
E. B. HANSEN
VICE-PRESIDENT
ROBERT A. BARNETT
TREASURER
H. G. YOUNG
SECRETARY
H. F. MILLER
VICE-PRESIDENT
ARTHUR WOOD
SECRETARY

February 8, 1918.

Dear Mr. Edison:

In forwarding to you our regular quarterly advice of this Company's financial condition, I take pleasure in condensing for your ready reference the following facts:

1. That the Net Worth of this business - after deducting the book valuation of Patents - is nearly \$4,000,000.
2. That our Current and Working Assets are as conservatively stated as it is possible so to do without misstating the facts.
3. That our Liabilities are as fully stated as possible, even to the extent of including all merchandise in transit to us and such items as Accrued Excess Profits Taxes not due and payable until next June.
4. That the ratio of our Current Assets to Current Liabilities is 2.3 to 1.
5. That the valuation of our Plant is less than actual, for the reason that -
 - (a) The Land values as shown have increased over and above the original purchase cost of same shown herewith.
 - (b) All Buildings not of very recent construction have recently been appraised and the valuation determined to be less than the cost of reproducing same, even before the present era of high building costs.
 - (c) Similarly, all Equipment not of recent installation has likewise been appraised, and the value of our Equipment proved to be conservative as compared with the cost of same before the present era of high prices.

6. That the valuation of our Patents is conservatively stated, in view of the fact that they protect a product the commercial return upon which has averaged 12% on the investment during the past three years.

7. That all of these Assets are absolutely free from Mortgage, Bond Issue or other form of indebtedness, except the Current Liabilities reflected on the attached Financial Statement.

This favorable condition has been made possible through the valued support of our good Banks. We are truly grateful to them.

Yours very truly,

Stephen B. Maubert.

Vice President and
Financial Executive.

Mr. Thomas A. Edison,
Fort Myers,
Florida.

*Dear Mr. Edison - This company
is now in about as close
financial condition as it
will ever be. To be able
to write a letter such as this
after three years work is
indeed a great pleasure.
I am sure that we will have
to run farther into debt, in
order to provide for immediate
expansion.*

Maubert

Lybrand Ross Bros & Montgomery
 CERTIFIED PUBLIC ACCOUNTANTS (Pa.)

OFFICES
 NEW YORK
 PHILADELPHIA
 CHICAGO
 BOSTON
 PITTSBURGH
 NEW HAVEN
 AGENCIES
 SAN FRANCISCO
 SEATTLE
 PORTLAND
 KANSAS CITY
 DENVER
 ST. LOUIS
 CLEVELAND
 LONDON, ENGLAND

EDISON STORAGE BATTERY COMPANY

CONSOLIDATED BALANCE SHEET as at November 30, 1917.

A S S E T S:		LIABILITIES:	
Cash in Banks and on hand	\$211,889.21	Notes Payable	\$600,000.00
Accounts Receivable, less Reserve	387,993.91	Accounts Payable	<u>239,555.88</u> \$839,555.88
Notes Receivable	<u>10,986.22</u> \$ 610,869.34	Sundry Accounts Payable:	
Sundry Account Receivable: Edison Portland Cement Co.	8.60	Thomas A. Edison	139,952.88
		Thomas A. Edison, Inc., et al	<u>8,877.66</u> 148,810.54
Inventories:		Deposits:	
Raw Material & Supplies	623,280.07	Uncompleted Contracts	68,688.95
Merchandise in Process	872,313.76	Batteries Rented	<u>15,876.00</u> 84,564.95
Finished Merchandise, in- cluding Consignments at cost	<u>438,327.32</u> 1,933,921.15	Accrued Pay Rolls, Taxes, &c.	<u>52,948.83</u>
Deferred Charges, consisting of unexpired insurance, &c.	<u>38,751.60</u>	Total Current Liabilities	1,125,880.20
Total Current and Working Assets	2,583,550.69	Contingent Reserve	32,125.07
P l a n t:		CAPITAL and SURPLUS:	
Land	73,952.03	Capital Stock, Common	2,998,300.00
Buildings	\$848,885.14	Do Preferred, 5% Cumulative	<u>1,801,300.00</u>
Less Reserve	<u>92,698.76</u> 755,886.38		
Equipment	2,291,970.25	Surplus	<u>4,799,600.00</u>
Less Reserve	<u>823,446.08</u>		<u>674,228.36</u> 5,473,828.36
	<u>1,468,524.17</u> 2,298,362.58		
P a t e n t s	<u>1,749,920.36</u>		
	<u>\$6,631,833.63</u>		<u>\$6,631,833.63</u>

We have audited the accounts of the EDISON STORAGE BATTERY COMPANY and its subsidiary selling Company and we certify that, in our opinion, the above balance sheet sets forth the true financial condition of that Company as of November 30, 1917.

New York, January 29, 1918.

Lybrand Ross Bros & Montgomery
 Certified Public Accountants.

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1

CONFIDENTIAL REPORT

to

EDISON STORAGE BATTERY CO.,

WEST ORANGE, N. J.

Regarding

Improvements to Plant and Reduction in Fire Insurance Rates.

Attention Mr. Arthur Mudd, Secy.

FEBRUARY 28TH, 1918.

Following our inspections of January 29th to February 2nd, inclusive, and various conferences on this matter with rating authorities, insurance companies, etc., I submit this report, requesting that it be treated with extreme confidence, for, until accepted by you (and then in different form) it is not to be presented to the Fire Insurance Companies or rating authorities.

I have completely abandoned any attempt, in laying out these requirements, to meet the makeup of the present schedule, and am proceeding entirely on the theory of reducing the possibility of fire loss to the lowest practical minimum and then convincing the companies that they have to find a way to adjust the insurance rates to the actual hazard rather than the theoretical hazard, as would be worked out in the schedule.

It is realized that we are proposing to transgress all the laws of the Medes and Persians in New Jersey, and for this reason we are not crying our plans from the housetops but have confidence in our belief that the thing can be done. But, no intimation of our plans or methods should be given to insurance inspectors, rating authorities or others, for I must handle this matter personally.

The writer did not see any details of the plans submitted by your former agents for the obtaining of a .42 rate, but from

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our study of the schedule we are very sure that the cost of such plans and the inconvenience to you of the installation they would require would render them entirely impracticable. I have tried to suggest improvements which will be found practical from an operative standpoint, and trust that you will promptly accept my requirements in their entirety, in exchange for the rates that I propose to ask for, which are:-

Blanketed buildings and contents, 90% co-insurance, covering the entire group of concrete buildings, . . .25

Blanketed entire group of buildings, including Box Shop, the contents of the same, lumber and coal, 90% co-insurance.264

Blanketed all contents of all buildings, materials in yards, lumber and coal, and all buildings except those of concrete construction, 90% co-insurance . .313

Note:- Above rates do not include any flat increases for war conditions.

The cost of the suggested improvements will be found moderate. The sprinklers will cost about \$10,000. I will attempt no estimates of the costs for metal boxes, metal shelving, metal furniture, metal partitions, etc., but they would not seem excessive and the improvements will be found to have a utility of their own, so that but part of their cost should be charged to fire insurance protection and against savings in insurance premiums.

I have required very few fire walls. There is no sense in putting through five complete fire walls, from the first floor to the seventh, which would be necessary to remove the charge from

gmn

the present schedule, provided the contents of the buildings are arranged in such manner as to prevent the spread of fire. As long as we have abandoned the principle of ten thousand foot areas, I see no reason in recommending fire walls where they are not needed.

The plans suggested will call for a pretty thorough housecleaning, which will be found a good thing from an operating standpoint, and the low rates suggested will warrant the companies in demanding the continuance of rigid cleanliness and order. This I assume.

The difference in cost (§640) between insurance, blanketed over the whole property, and insurance excluding concrete buildings at the rates suggested, is so very small as to be negligible. As any fire will produce more or less damage to fireproof buildings and entail repairs, cleaning up, whitewashing, etc., I recommend the inclusion of them in the insurance. Further, the effect of this inclusion will be extremely good on the minds of the insurance companies and will make my proposition easier to put through.

It is my opinion that you should be well satisfied with an annual insurance cost of \$10,065.50 against the present cost of thirty to forty thousand dollars, and that the adoption of these improvements and plans will return a very large interest

J.S.

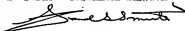
on your investment.

Bound into this report are an insurance plan of the property
and plates showing the floors and occupancy in detail.

Requirements for improvements and details of metal shelving
construction you might manufacture quite economically.

Respectfully submitted,

FRED S. SMITH - INSURANCE SERVICE



FSS:KIM

REQUIREMENTS

for the

EDISON STORAGE BATTERY CO.,

WEST ORANGE, N. J.

Attention Mr. Arthur Mudd, Secretary.

FEBRUARY 29TH, 1916.

- 7
- 7
1. All wooden partitions, not extending to the ceiling, to be replaced by partitions of non-combustible material; heavy wire netting on iron posts wherever feasible. All necessary wooden partitions, extending to ceiling, such as enclosures around War Goods Office, to be covered on both sides with sheet metal. Suspended platform in Cell Testing Room, 1st story #130 and Deck in 2nd story, #137 to have all exposed surface covered with sheet metal.
 2. All vertical spaces between stairway and elevator enclosures and windows to be tightly stopped with cement plaster of a thickness equivalent to the enclosures.
 3. 12" brick fire walls to be erected in the following locations:-

1st story:

- a. Between Wooden Box Japanning Room and the Carpenter Shop, #134.
- b. Between Packing Room and Driveway, #130.

2nd story:

- c. Around Metal Cell Box Japanning process #130.

4th story:

- d. In #130, separating off phonograph storage.

Note: Reverse motion picture machine storage in the north wing of #130 with phonograph storage in the south wing of #130 in such a manner that a brick wall, as shown on 4th story plan, will comply with the above requirement.

5th story:

- e. In #130, to separate off phonograph storage.
4. Electric light and power equipment to be thoroughly examined, properly insulated and fused; all switches and fuses to be enclosed in self-closing metal cabinets; rheostate or other heat-producing equipment mounted on slate slabs where in the vicinity of combustible material.
5. Automatic sprinklers, wet pipe system, to be placed throughout the following locations:-

1st story:

- a. In Packing Room
- 183

- b. Gasoline Automobile Garage.
- c. Cell Japanning Room.
- d. Japanning Room adjacent to #134.

2nd story:

- e. In Automatic Screw Machine Room.
- f. Metal Cell Box Japanning Room.

3rd story:

- g. Ten sprinklers spaced around wooden rack in #135.

4th story:

- h. In Phonograph Storage Room.
- i. Pocket Press Room.

5th story:

- j. Phonograph Storage Room.
- k. Entire floor of #137.

6th story:

- l. Entire floor of #137.

7th story:

- m. Pattern Storage Room, #130.

Location and arrangement of sprinklers, feed mains, risers, valves and fittings, also spacing of sprinklers, size of pipes and all matters pertaining to the sprinkler system to be installed in a manner satisfactory to the rating authorities.

6. Supplies. Two supplies of water to be provided as follows:-

- a. Connection to be made with Public Waterworks' main in Valley Road, to be made through not less than a 6" pipe.
- b. Connection to be made with 10" pipe with supply from pump to yard system on the supply side of the 6" meter between #130 and #137.

7. Gate valves controlling water supplies to sprinklers to be fastened open by leather strap with ends riveted or padlocked, common keys being used and kept by responsible parties.

8. All 2½ and 40 gallon chemical extinguishers to be re-charged at

BB

least once a year and tagged and dated at time of re-charging.

9. Private hydrants to have outside gate valves for each outlet, and to have houses constructed in accordance with requirements of the National Board of Fire Underwriters (descriptive pamphlet with outs enclosed). Each house to contain 100 feet of 2-5/8" cotton rubber-lined hose, two Underwriters' play pipes having 1-1/8" smooth nozzles, one hydrant wrench, 6 spanner wrenches, one axe, one crowbar, one lantern and 6 spare washers.
 10. Underground piping to be cast-iron, tar coated and capable of withstanding a static pressure of 200 pounds.
 11. Plans showing inside and outside system of piping, also all valves, etc., to be submitted to the rating authorities for approval before work is begun.
 12. Necessary approved safety waste cans, with self-closing covers, to be provided in Printing Room, 6th story, #130 and in Mimeograph Printing Room, 6th story #137.
 13. All gasoline or naphtha used for cleaning type or similar processes, to be kept and used from private safety cans instead of from glass bottles or open containers.
 14. A systematic inspection of all fire appliances and other matters pertaining to the fire risk should be made at least weekly by some reliable and responsible party. A detailed written report to be made, reports being dated and filed for information by the insurance ~~underwriters' inspections~~ ^{department}.
- This inspection should preferably be made by members of the Private Fire Brigade, in order that each member may become well acquainted with the location and the purpose for which each appliance has been provided.
15. The benzine washing hazard, carried on in #131, to be discontinued or removed a sufficient distance from the premises as not to carry an exposure charge.
- Note: This might properly be installed on the roof of south wing, #13D.
16. All wooden boxes for storage of parts or supplies to be replaced by metal receptacles or by fibre receptacles where metal ones are impracticable.
 17. All wooden stools and furniture to be discontinued and replaced by metal.

13D.

18. All wooden shelving or racks in places not provided with sprinkler protection to be torn down and replaced with steel or have the surfaces entirely metal-clad.
19. Oil cooled transformers in Power Room, 1st story #130, to be piped to a safe distance outside. Remote control valves to be arranged in such a manner that they can be operated from outside of room without danger to the operator from overheated or burning oil.
20. A substantial curbing 6" high, to be built around transformer stands and the basin thereby created, drained with a 6" pipe to sewer connection or elsewhere.
21. Rmelsior in Packing Room, when not in use, to be kept in a metal-lined bin with automatic self-closing cover.
22. Electric wiring in Oil Japanning Room, 1st story, #130 and in Pocket Press Room, 4th story #130, to be installed in metal conduit with bulbs enclosed in vapor-proof, guarded globes, with all switches or sparking appliances outside of room. All other spark-producing electrical equipment to be removed from rooms.
23. Operators in Cell Parts Annealing Room, 1st story #135 to be familiar with the location of shut-off valves in oil supply to furnaces in order that these may be expeditiously closed in case of failure of the air supply to prevent flooding of burners.
24. All miscellaneous storage, especially that contained in wooden receptacles, such as that now located in the 4th story of #130 opposite the Pocket Press Room, to be removed to the 6th story of #137, which should be the depository of such material, for which reason we propose equipping this room with automatic sprinklers.
25. Pitch melting to be removed from #132 to an especially constructed fireproof annex adjacent.
26. Calcium carbide in excess of 600 pounds or preferably in excess of one day's supply, to be stored in this proposed fireproof annex to #132 and separated from the pitch melting process by an unpierced 12" brick wall.
27. Opening left through all floors in south wing of #132 for future elevator, to be shut off by reinforced concrete slab covers of thickness equivalent to the flooring; present wood planking to be eliminated.

Respectfully submitted,

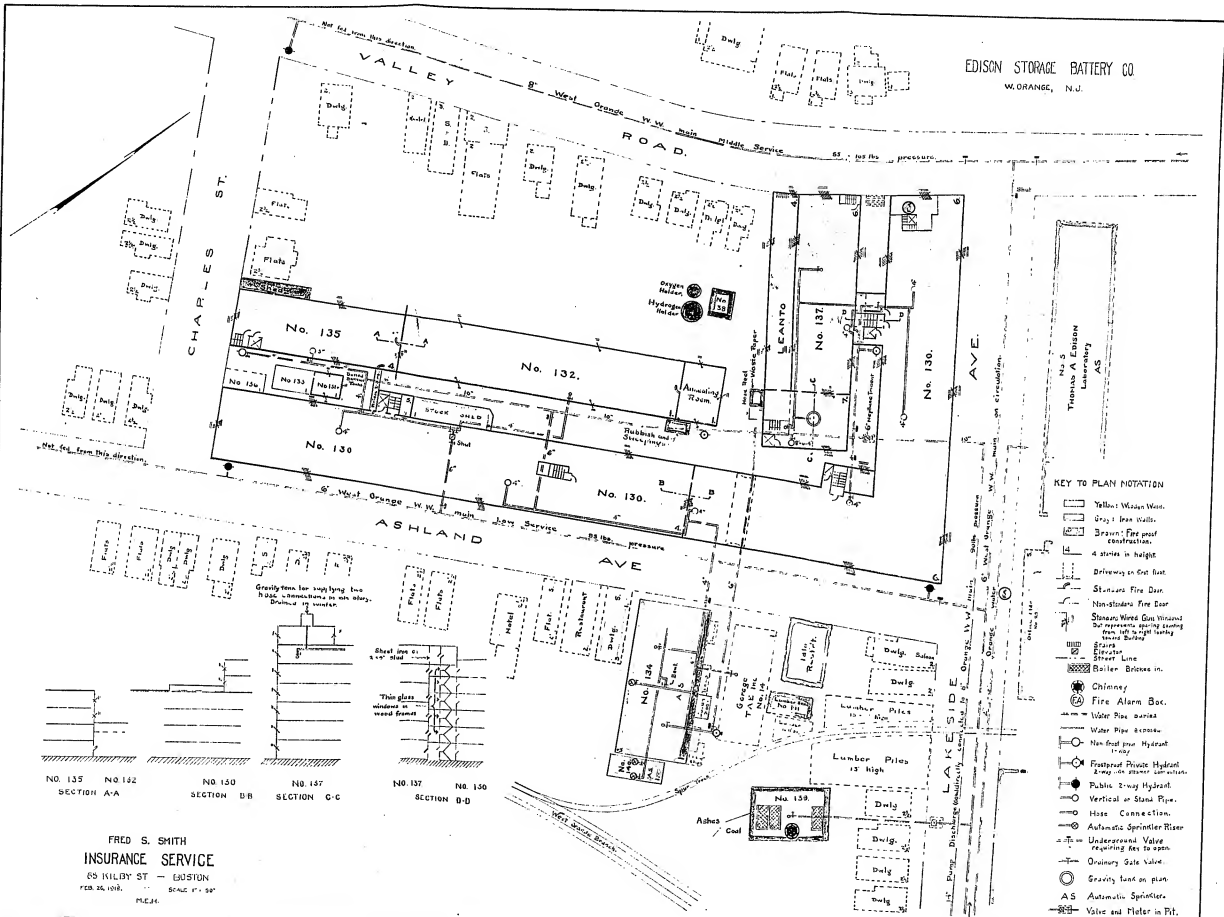
FRED S. SMITH - INSURANCE SERVICE

Eng.
M. H. KIM

M. Chu Hill
Engineer.

388.

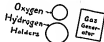
EDISON STORAGE BATTERY CO.
W. ORANGE, N.J.



FRED S. SMITH
INSURANCE SERVICE
69 KILDY ST. - EDISON
FOR 26, 1018.
SCALE 1" = 20'

[REDUCTION RATIO = 16:1]

W. ORANGE, N.J.



- 7 Private Fire Alarm Boxes.
- 5 Klaxons.
- 8 Watchmen Stations.
- 10 Hose Connections - 2 1/2" - with 30' linen hose of 9.
100' R.L. hose of one - All 3/4" nozzles.
- 22 Chemical - 2 1/2 gal. - Extinguishers.
- 3 Chemical - 40 gal. - Extinguishers. on wheels.
- 3 Pyranes.
- 4 J.M. Extinguishers.

OCCUPANCY

Wood Box
Assembling
Drill
Presses

AS

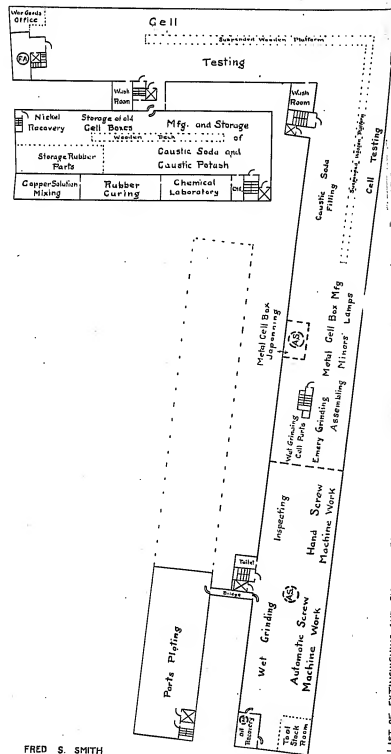
Sand Wheel
Sewing
Planning
Storage of
Stock

Japanning

Lumber
Drying

(AS)

[REDUCTION RATIO = 16:1]



LIST OF EXTINGUISHING AND SIGNALING EQUIPMENT

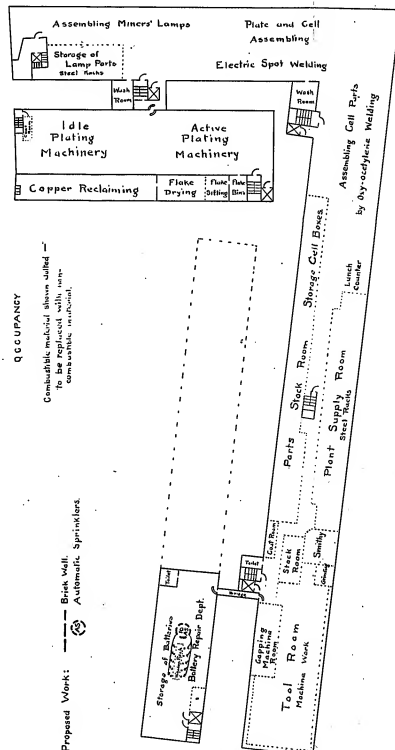
- 1 Public Fire Alarm Box
- 5 Private Fire Alarm Boxes.
- 4 Meters.
- 10 Hose Connections - 2 1/2" with 50' hose hose at 8.
- 9 Hoses Connections - 2 1/2" with 50' hose hose at 8.
- 10 Chemical 100 lb. - All 5% mastic.
- 1 Chemical 100 lb. - Extinguishers.
- 1 Chemical 240 gal. - Extinguisher on wheels.
- 1 Fire Axe.

SECOND STORY

OCCUPANCY

Combustible material shown shall -
to be replaced with non-
combustible material.

Proposed Work: — Back hole
Automatic Sprinklers



LIST OF EXTINGUISHING AND SIGNALING EQUIPMENT

- 5 Private Fire Alarm Boxes.
- 5 Meters.
- 10 Hose Connections - 2 1/2" with 50' hose hose at 8.
- 9 Hoses Connections - 2 1/2" with 50' hose hose at 8.
- 10 Chemical 100 lb. - All 5% mastic.
- 1 Chemical 100 lb. - Extinguishers.
- 1 Chemical 240 gal. - Extinguisher on wheels.
- 4 Fire Pails - water.
- 1 Fire Pail - sand.
- 1 Fire Axe.

THIRD STORY

OCCUPANCY

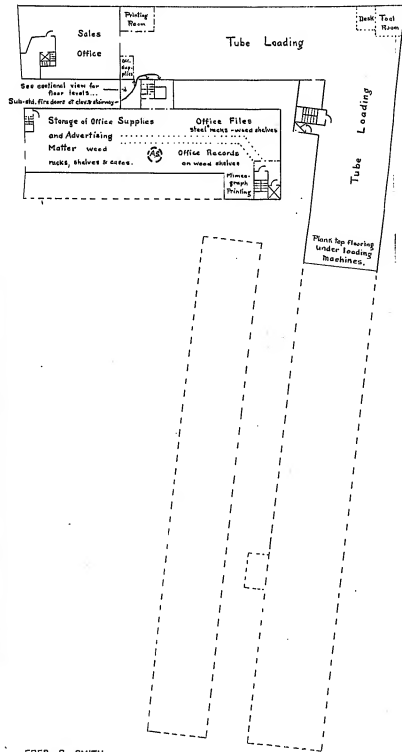
Combustible material shown shall -
to be replaced with non-
combustible material.

FRED S. SMITH
INSURANCE SERVICE
65 KILBY ST. - BOSTON
DEC. 14, 1918. Scale 1" = 50'
P.E.H.

[REDUCTION RATIO = 16:1]

FRED S. SMITH
INSURANCE SERVICE

65 KILBY ST. - BOSTON
FEB. 26, 1918 SCALE 1" = 80'
M.C.H.



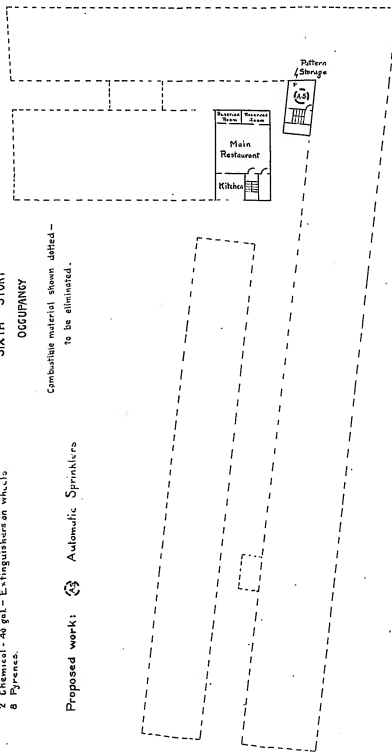
LIST OF EXTINGUISHING AND SIGNALING EQUIPMENT

- 4 Plank Fire Alarm Box.
- 3 Kitchens
- 3 Watchmen Stoves.
- 1 Hose Connection - 15' with 30' line hose at each.
- 2 Hose Connections - 15' with 30' line hose at each.
- 15 Chemical - 25 gal. - Extinguishers, supplied by tank only, in warm weather.
- 15 Chemical - 25 gal. - Extinguishers, supplied by tank only, in warm weather.
- 8 Pyrene.

SIXTH STORY OCCUPANCY

Combustible material shown dotted -
to be eliminated.

Proposed work: Automatic Sprinklers



LIST OF EXTINGUISHING AND SIGNALING EQUIPMENT

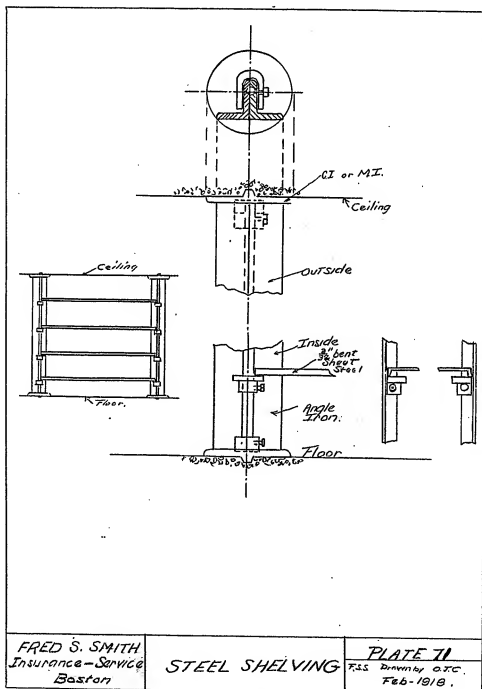
- 1 Plank Fire Alarm Box
- 1 Kitchen
- 1 Watchman Stove
- 1 Hose Connection - 15' with 30' line hose at each.
- 1 Hose Connection - 15' with 30' line hose at each.
- 15 Chemical - 25 gal. - Extinguishers, supplied by tank only, in warm weather.
- 2 Chemical Extinguishers - 25 gal.

Proposed work: Automatic Sprinklers.

SEVENTH STORY OCCUPANCY

EDISON STORAGE BATTERY CO.
W. ORANGE N. J.

[REDUCTION RATIO = 16:1]



Edison Storage Battery Co.

CHARLES EDISON
OF THE BOARD

THOMAS A. EDISON
Thomas A. Edison

ORANGE, N.J. U.S.A.

OFFICE OF
VICE-PRESIDENT AND FINANCIAL EXECUTIVE

THOMAS A. EDISON PRESIDENT
E. B. HARRIST VICE-PRESIDENT
ROBERT A. EDISON SECRETARY
H. S. THOMPSON TREASURER
H. F. MILLER TECHNICAL ASSISTANT
ARTHUR MUDD ENGINEER

March 2, 1918.

Dear Mr. Edison:-

At the Executive Committee Meeting of the Edison Storage Battery Company, held Thursday, February 28, Mr. Bachman told us the Government intended to take over the factory, diverting the entire output to the Signal Corp. In this event, we will not be allowed any cost for advertising or selling expense. Thus, we will be faced with the alternative of either keeping up a non-productive sales organization during the war or building up a new one at its close.

In connection with increasing the schedule of production at the Chemical Works from 8000 to 4000 A-4-Equivalent cells a day, Mr. Miller is ordering a new dryer from the Philadelphia Textile Machinery Company which has a daily capacity of 1000 A-4-Equivalents and will effect a considerable time saving in drying Iron Mix. In the event it does not effect a time saving sufficient to offset the necessity of scrapping the old driers, we are incurring only shipping and installation expense. In the event this dryer does prove satisfactory, I have instructed Mr. Miller to negotiate for the same price on three additional driers, as I understand the price on this equipment is to be advanced.

I am sending Charles a copy of an advertisement which appeared in "Professional Memoir" authorized by M. R. Hutchison, Incorporated, without our knowledge. This has caused considerable unfavorable comment, dealing as it does with the nationality of Battery Manufacturers. Accordingly, I have asked Mr. Thompson to notify M. R. Hutchison, Incorporated, that any advertising they contemplate in connection with Edison Storage Batteries, must first be approved by the Executive Committee.

Faithfully yours,

Mr. Thomas A. Edison,
Key West, Florida.

Marshall
4

Edison Storage Battery Co.

CHARLES EDISON
EDISON
OF THE BOARD

TRADE MARK
Thomas A. Edison

ORANGE, N.J.U.S.A.

OFFICE OF
VICE-PRESIDENT AND FINANCIAL EXECUTIVE

THOMAS A. EDISON PRESIDENT
E. B. HANBERT VICE-PRESIDENT
ROBERT A. BARNHART SECRETARY
H. G. THOMPSON TREASURER
H. F. MILLER GENERAL MANAGER
ARTHUR HUGO SECRETARY

March 19, 1918.

Dear Mr. Edison:

I am enclosing ten Edison Storage Battery Company notes in denominations of \$100,000 each. Three of these notes I expect to discount with the Bankers Trust Company, New York City, for a period of one year; three more I expect to discount with the War Credits Board to be paid back at the rate of 3% on Signal Corps deliveries; the four remaining ones I wish to have in reserve hoping that I may possibly have the opportunity to use same with the First National Bank of New York or with the Continental and Commercial Bank of Chicago.

Kindly affix your signature as President to all of these notes. Your personal endorsement on reverse side of notes is required as follows:

Please endorse the three notes to be discounted at the Bankers Trust Company.

Please endorse the five blank notes, as indicated by pencil notation.

The remaining two blank notes should not be endorsed, which fact I have noted on same in pencil.

I received your inquiry relative to Storage Battery losses after the cessation of government business, and I am writing you at considerable length how I have been endeavoring to safeguard the Storage Battery Company in this respect.

Faithfully yours,



Mr. Thomas A. Edison,
Key West, Florida.

April 9, 1918
AP-21-1006

Mr. Lamar Lyndon:

In reference to your note regarding a fused electrolyte for reducing Fe_2O_3 to Fe O or to Fe would say that fused caustic soda may possibly answer some of these requirements, but in view of the fact that pyrophoric or sponge iron can be so readily plated into mercury, it hardly seems advisable to work on anything else. For your information I might say that this process was subjected to a partial examination by me at the time Silver Lake was tying up the plant for want of iron, the idea being not so much to produce a better iron, but to do whatever was possible to relieve the situation, by any process which could be investigated conveniently at Orange, the idea being to produce an iron which would meet the requirements when made from any iron.

Mr. Debyns has acquainted you with the ease of making iron by this process and also the control of the oxidation by electrochemical means, namely making the mass the anode in an alkaline bath. It is not claimed that this process will best the chemical process, but I am confident that it will not be easy to find a better means of making it electrochemically.

In reference to your note regarding the "Chemical Theory of the Edison Storage Battery" evidently proposed by A. M. Kennedy would say that the equations check in the sense that they balance from a chemical standpoint, but the fact that a certain equation can be written does not necessarily prove that this can be done. In looking at the alleged reason given why this equation should be more reasonable the following may be noted:

- (1) The first reason is a quotation from a book, the theory advanced being logical, but since Mr. Jones did not use the chemical reactions of the Edison Battery to prove his theory, the burden of proof rests upon anyone who attempts to use the theory to explain the Edison Battery.

- (2) " Ni (OH)_2 is green. Ni (OH)_3 is black. Agreeing with what occurs in cell."

Although Ni (OH)_2 is green and Ni (OH)_3 is black, it is not to be forgotten that after the first charge the active material is never visibly changed. If color changes are to be taken as a criterion, there would have to be some very conclusive proof furnished that there is a color change. Fifty percent of oxygen should be readily visible by converting the black to a gray.

- (3) This is already disposed of by your marginal note, and in fact the author is evidently not sure of the matter as he inserts "I believe". Mr. Kennedy is wrong on this point.
- (4) "Shows that twice relative weight of Nickel Hydrate is needed as of iron or iron oxide for complete reaction. "Agrees with cell conditions". If the term "Agrees with cell conditions" is intended to mean that twice the weight of nickel hydrate is actually put in the cell, it should be noted that 2.5 lbs. of hydrate and 2.2 lbs. of iron mix are put in an A4 cell. Perhaps the author means, not what we actually use, but what we should use.

April 9, 1918
AP-21-1006

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Mr. Kennedy is to be complimented for the novelty of his proposition, but if it was proposed for the purpose of displacing the old theory, I am afraid he will be disappointed in having his theory accepted. Fortunately, the published formula requires some heats of formation which are not obtainable. Therefore, it is impossible to calculate the thermodynamics that you request. Since the published formula includes a solid solution action, Mr. Edison is undoubtedly correct.

Mr. Dobyne came to this laboratory, stating that you had requested him to think of some substance which would change the vapor tension of the electrolyte, thereby increasing the voltage of the cell. I told him that I was very doubtful if a change in the vapor tension would change the voltage of the cell to any appreciable extent, in fact I pointed out that all on the top cell does not change the voltage. Mr. Dobyne later on delivered a copy of "The Theory of the Lead Accumulator" by Dolzalek from you, stating that in this book the effect of vapor tension on the voltage could be found. The book being in German makes it difficult to look all through, but the nearest that could be found was the chapter on the effect of increased external pressure. Since increased external pressure will raise the boiling point and the vapor tension is never determined per se, but is found by the change in boiling point, it follows that increased pressure must change the vapor tension. Since Dolzalek states that one hundred atmospheres only changed the voltage eleven ten thousandths of a volt, it is clearly evident that this is not a profitable line to work upon.

A. PETERSEN.

Cf. R. A. Bachman.

A. Petersen

Mr. Monnot Battery - Storage.

FROM THE EXPORT DIVISION OF EDISON STORAGE BATTERY COMPANY,
10 Fifth Avenue
NEW YORK CITY

May 21st, 1918.

Mr. Charles Edison:-

I would refer you to Mr. Edison's memo addressed to yourself dated April 15th, 1918, in reference to the attention given to the execution of Edison Accumulators' Storage Battery orders, also your notation thereon, reading as follows:

"Mr. Stevens - Please advise me"

As of Saturday May 18th we had on hand uncompleted Storage Battery orders with the Edison Storage Battery Company amounting to \$356,795.00. This amount includes unfilled orders for account of Edison Accumulators, Limited, as of same date amounting to \$185,207.21. Several of these orders have been standing open since October of last year. And we are constantly receiving letters from Mr. Monnot, indicating that his business is in a deplorable condition on account of our failure to make shipments. Mr. Monnot has enlisted the services of the British Government in his behalf, and through their medium representations have been made to the British Importations Board's representative in New York, Sir Gomon Guthrie, who is doing his utmost to provide space on such vessels as the Board may directly control. Only last week we were advised that they had space for 4 ton Storage Batteries, but the factory was unable to supply a single cell. The Export Division took over Edison Accumulators' business March 1st, 1918, and since that date, i.e. during approx. 2 1/2 months, we have shipped the following material:

772 A-4 Cells
192 A-5 "
96 A-6 "
60 A-8 "
60 A-10 "
42 W-1-2 "
600 #20 Cans Electrolyte
50 Pillars
— miscellaneous parts

Mr. Monnot is particularly desirous of obtaining B-6 Cells, and he claims to have a large number of Kivell-Parker trucks ready, for which these cells are required. He also advises

/2/ Mr. Charles Edison

having a number of Walker and Lonsden Chassis for which he requires A-4, A-8 and A-10 Cells.

In view of the large number of orders we have on hand for Edison Accumulators, Limited, many of which dating back five, six and seven months, we can quite appreciate that Mr. Komot is greatly exercised on account of the delay in executing same.

Further, he is constantly calling our attention to the clause in his agreement which reads as follows :

PAGE 3 - CLAUSE 5.-

"The Edison Storage Battery Company agrees to supply the Company (Edison Accumulators, Ltd.) with Edison Storage Batteries of the most improved standard commercial types, not to exceed a maximum of 3000 A-4 Cells or their equivalent in A.H. capacity per month."

In view of present conditions as existing, we are fully protected in view of the following, which is part of clause 5:

"It is especially agreed that the Edison Storage Battery Company shall be relieved of all liability under this paragraph in case of the performance thereof is rendered impossible by fire, riot, strike, or the Act of God or the Public Enemy"

Edison Accumulators' Agents in New York, Messrs Balfour, Williamson & Co. have advised us that they are ready to take over immediately 500 cases Storage Battery material for account of Edison Accumulators, Ltd.

We recently received an order from Edison Accumulators, Limited, for 180 batteries of 21 cells type B-4 each, or a total of 3780 cells, and they stipulated that 16 batteries or 336 cells should be shipped every two weeks. In acknowledging receipt of this order, I advised them that we would do everything possible to facilitate shipments against same, but could not guarantee semi-monthly shipments as stipulated.

We have also a very large number of miscellaneous orders which have been standing open for several months, for some of which export licences have been received and our clients are constantly urging us to make delivery.

A. N. JOHNSON & CO. LTD., CAPE TOWN, S. AFRICA. We have the following orders on hand for those people for shipment to South Africa:

500 B-4 Cells	- Placed October 31st, 1917
200 A-8-H "	" " May 6th, 1918
4000 B-6-H "	" " May 4th, 1918
180 A-8-H "	" " May 14th, 1918

/3/ Mr. Charles Edison.

I am in receipt of a cable from Messrs. A. H. Johnson & Co., Ltd., reading as follows:

"Government chartered special vessel sailing from States
"end July - Space all our orders with you will be granted
"this steamer if you can promise delivery cable immediately
"can you supply"

The 4000 B-6-K Cells referred to above are for the South
African Government Railways.

AGAR, GROSS & CO. BUENOS AIRES. - We have on order 700
B-2 Cells placed January 3rd, 1000 B-6 and 200 A-4 Cells placed
April 12th.

Messrs Agar, Gross & Co. recently advised us that their
Government license had about expired and indicated that difficul-
ties would be experienced in having this license renewed, but we
were unable to make any deliveries.

ARTHUR EYERSE, CHRISTIANIA, NORWAY. - We have orders for
immediate delivery, SOVEREIGN 450 A-6, 930 A-3 and 180 A-10 Cells
ARMED AND MANNED - ~~ARMED AND MANNED~~ and the following orders
for shipment to our Sydney Office:

625 B-2 Cells	100 A-5 Cells
110 B-1-K "	85 A-3 "
260 B-4 "	10 G-1 "
100 B-6 "	10 G-6 "
450 A-4 "	120 K-20 "
198 A-6 "	

At the present time we are obliged to overcome almost
unsurmountable difficulties in the matter of obtaining export
licenses. If we finally succeed in obtaining a license for a
stated number of cases and part shipment only is made, we must surrender
the license and then obtain a new one for the balance of the shipment
which means a further delay from one to two months.

The Government is constantly changing their policy in reference
to granting export licenses and our position is becoming more difficult
almost daily. I believe that some one in the Edison Storage Battery
Company should be delegated to give particular attention to the execution
of our orders, advising us daily, semi-weekly or weekly as to the bat-
tery material to be assigned to our orders, and co-operate with us in
order that orders for which licenses have been received should be given
preference. All things being equal, we would have no right to expect
preferential treatment, but conditions at present in regard to making
foreign shipments are so unusual and steamship space so scarce, that
some preference should be given over domestic orders which can be shipped
immediately the goods are ready without formalities.

*C.E. will arrange
with HGT. to
have 1000 cells to
act in this
capacity.
Munster*

BATTERY -
STORAGE -
EDISON SPOR. BATT CO.

May 24, 1918.

Mr. Charles Edison.

My Dear Charles:

ORGANIZATION:

Following Wednesday morning's meeting of the Board of Directors and the Executive Committee, I took my two good assistants, Messrs. Mudd and Ward, to lunch with me, and in the course of conversation gave expression to my surprise that neither of them, as closely in touch with the business as they are, and being constantly in contact with all of the Storage Battery Company's problems and the members of its organization, etc., were able to put their finger on the cause of our difficulties, as indicated by the present situation, and the fact that it seems to be increasingly necessary to tie up more and more money in the business, which does not seem to be warranted by the volume of business which we are doing.

MANUFACTURING: Mr. Mudd asked me a few questions about Phonograph Works, and I explained to him that with Mr. Luhr constantly in the factory, going around from department to department, and knowing as he does most of our old men personally, and being an expert mechanical man, a very favorable condition exists throughout the Phonograph Works, due to the fact that the "big boss," as it were, is constantly in rather close touch with all of the men, and the men can at any time look up from their work and see him.

I explained to him that all of the Company's records, the computing of the time for payment of work, and the records in connection with the transfer of material from department to department, and the giving out of work to the men, and the records of the work which passes inspection, and so on, are all under the supervision of Mr. Howard Pokert, now Secretary of that Company, and formerly Assistant Treasurer, and that Mr. Pokert's previous training in the Treasury Department, where he has learned to know the value of money, places him in a frame of mind where he looks upon raw materials and work in process and finished parts, and instruments in the factory, as so much cash; whereas most men do not view them from the cash standpoint, and as a result thereof Mr. Pokert is truly valuable to the organization,—much more valuable than the average man occupying a similar position, who does not take the same viewpoint of things.

Mr. Mudd enquired about George Owen. I explained that Mr. Owen occupies a sort of middle ground as it were; that he is neither giving

Mr. Charles Edison:

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May 24, 1918.

attention to the matters that are being looked after by Mr. Luhr, nor is he giving attention to the matters being looked after by Mr. Eokert, but his problem has been to maintain the flow of work through the Phonograph Works, to regulate the flow of incoming materials and the flow of outgoing finished product in accordance with our needs, and, in connection with this, tying up with Mr. Luhr on the one hand and with Mr. Eokert on the other, and that in this arrangement we have a combination that is hard to beat.

Today, following the Secretarial Conference (a weekly meeting which I organized a couple of years ago for the purpose of having the common problems of men doing a similar class of work brought up for co-operative discussion and joint-getting recommendations and action) Mr. Mudd asked me if I would stop in the office for a little time on my way out of the Battery Company Building. This I did, and he referred to the conversation which we had had the day before yesterday, and said he had been giving the matter considerable thought, and had come to the conclusion that the Edison Storage Battery Company, as now organized, is suffering from a lack of management fully as much as the claim might have been made before the present scheme of organization was put into effect, that it was suffering from too much management. Mr. Mudd said: "Take, for example, the Phonograph Works. You told me the other day of the good results that are being obtained there. There is really no one in the Battery Company that is exercising fully the function which Mr. Luhr is exercising in connection with the Phonograph Works."

I presume that Mr. Mudd means that Mr. Monahan is the tool and equipment man, but is not so strong on the personal touch with the men. And whereas Mr. Bachman is strong on the personal touch with the men, he is not constantly in the factory in the way that Mr. Luhr is. This may be partly due to the fact that as General Manager he feels that a larger portion of his time must be devoted to matters of a general nature than is true in the case of Mr. Luhr, who more fully feels that he is Works Manager.

Mr. Mudd said: "Take the case of Mr. Eokert. I personally (meaning himself) probably parallel Mr. Eokert more closely than anyone else in the organization, but whereas Mr. Eokert is able to give his entire time to the manufacturing problems I (meaning myself) must give my time to the selling problems, and to such problems as John V. Miller brings up to my attention, etc., etc. So that even I (meaning myself) am not able to maintain that same close contact with the situation that is possible in Howard Eokert's case."

"If this were not enough (continued Mr. Mudd) we have no man in the Manufacturing end of the Edison Storage Battery Company who corresponds to George Owen in the Phonograph Works. We have no man who is devoting his time entirely to the planning of work through the factory, to see that the minimum amount of wastage is required, and that the flow of value is maintained normally, and so on."

(You know I have been drawing to the attention of everyone in the Battery Company that I do not see how they can properly balance the situation without bills of material, so that when they have it is necessary to produce so many C-8 cells, or when they have it is necessary to produce so many C-9 cells, or

Mr. Charles Edison:

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May 24, 1918.

manufacture of G-4 cells, they would know what quantities of materials are represented, in order to fill on order, and they could start their materials coming in and have everything flow through in a normal manner.)

"Since you," said Mr. Mudd, addressing me, "have drawn to my attention the fact that we have no bills of materials corresponding to our complete cells, I have been giving a little thought to this problem, and I believe that I can very quickly devise an automatic scheme for controlling the situation, which is something we absolutely must have. But of course if I undertake to do this it will mean the neglect of my regular duties as Secretary of the Company, and you are asking me to maintain all of our relations at a very high standard, which I am anxious to do, and which in reality it is my real work to do and work which I like and am perfectly satisfied and contented to do--the work in which I am happy. But if I am not to do these things it is very evident that some one should be found to do them."

In other words, Mr. Mudd has found that we have no real planning head for the Edison Storage Battery Company that corresponds to the function that we hope Mr. Owen is going to perform satisfactorily in the Phonograph works.

As you probably have observed, I have been trying to bolster up this weakness through my assistant, Mr. Murah, but this is only a temporary expedient and not one on which I expect to base permanent success. It is an expedient which I have adopted because I rather felt it would be difficult to introduce a new man into the Edison Storage Battery Company organization to fulfil this need to which Mr. Mudd gives expression.

I thought it would be of interest to you to know that independently of my own thought another man closely in touch with the Edison Storage Battery Company situation has arrived at the same conclusion.

READING: I was just on the point of leaving Mr. Mudd, after we had discussed several other matters, when he called me back and said:

"There is another thing along this same line of organization, and that is, we ought to have a Manager of Sales who is here all the time. We should have some one here to whom all the business matters of the Selling Division can be referred, and who will decide things and give the 'Yes' or 'No.' It is all right--in fact we should have a General Sales Manager who is constantly out and meeting our customers, and gingering up our salesmen, and doing the hand-shaking, and so on. But it is not right to have the same man exercising both functions, because when this same man is away there is nobody to decide the things which come up for decision in the selling branch of the business."

"We have grown to the point now when the number of these things coming up is constantly increasing. There are all kinds of contracts, and matters of a follow-up nature. In connection with which the proper attention means promotion of the Company's interests, and saving of many dollars, and at the present time these matters are being rather bandied around from floor to floor because of lack of such a man."

Mr. Charles Edison:

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May 24, 19.

This will be a matter of interest to you (Mr. Charles Edison) in view of the recent conversations which we have had with Mr. Thompson, and confirms the fact that the need exists in the Edison Storage Battery Company for some one to take the place of Charlie Peyer.

Mr. Mudd said that such a man should be of the business manager type; that to save a little money in salaries the Storage Battery Company is now running an enormous risk by not having enough business judgment to be able to satisfactorily handle all the matters which are coming up from time to time.

Mr. Mudd gave expression to the thought that he was trying to fulfil these needs at the present time probably more than any of the other officers of the Company realized, and was perfectly willing to go on trying to fulfil these needs--in fact he was not trying to get out from under any work, but he wanted to see this Storage Battery Company take its proper place in the industrial world, and he felt that at the present time it was being handicapped because of a lack of sufficient business heads to fulfil the needs, and to take advantage of every possible opportunity which presented itself for the conservation of the Company's real resources, the upbuilding of its future, and the making of present savings.

In the light of our present situation in the Battery Company, which, as you know, I have been unable to explain to myself on any reasonable basis, and which I believe you likewise have been unable to explain to your own satisfaction, or have anyone else explain it to your satisfaction, the above remarks are very pertinent. I do believe that if the men immediately in touch with the problems of this big business do not themselves see the necessity so feel inclined to recognize the need of additional strength in the form of added business management, we will have to quietly and agreeably bring them to the point where they do see it, because the interests which we have at stake are entirely too great to continue the situation as at present.

Sincerely yours,

AEN

BATTERY - STORAGE -

Edison Storage Battery Co.

CHARLES EDISON
PRESIDENT
OF THE BOARD

THOMAS A. EDISON
Thomas A. Edison

ORANGE, N.J. U.S.A.

OFFICE OF
VICE-PRESIDENT AND FINANCIAL EXECUTIVE

THOMAS A. EDISON PRESIDENT
S. B. HANBURY VICE-PRESIDENT AND
FINANCIAL EXECUTIVE
ROBERT A. EDISON SECRETARY AND
TREASURER
W. A. THOMPSON MANUFACTURING AND
TECHNICAL MANAGER
H. T. MILLER ELECTRICAL MANAGER
ARTHUR HUDGOLD TREASURER
SECRETARY

CONFERENCE, JUNE 10, 1918.

Present: Mr. Charles Edison
Mr. M.M. Jones
Mr. O.S.A. Williams

Subject: Procedure in Tube Inspection and Tube
Assembly Departments relative to pro-
duction campaign.

GENERAL CONCLUSION: That wherever possible and as far as possible
girls be put on the work in these two departments, rather than men, since
there seems to be no job except graphiting that is unsuitable to women.

A scheme of promotion to be worked out, along the following lines:

(Outline by Mr. Jones): The first thing is to bring Miss Myrna
Brown into the Department as Instructress, to set up a training room in one
section, properly separated from the balance of the room. Instructress to
receive all applicants for work when sent from Employment Department, and
to definitely check the following points:

1. That the work is satisfactory to the applicant.
2. That it is convenient to her residence.
3. That the rate of pay is satisfactory.
4. That she is a type that fits into the program of the Department.

If the candidate satisfactorily passes these points she is then to
be definitely engaged, with instructions to report to the Instructress at a
certain time. When she reports she will have proper card, and Instructress
will take her to the time-clock, describe the reason for the use of the time-
card, and how to use it. She will then show worker where to hang clothing,
explain when she will be paid, and location of toilets.

Worker will then be taken to training room and started at the foot of the class. If several girls are started the same day they will group themselves around the table, and the instructress will point out;

1. Just what the operation is.
2. Where the part fits in to the Storage Battery.
3. The part it performs in the Storage Battery.
4. The purpose of a Storage Battery.
5. Brief statement of how it was developed by Mr. Edison.

Workers will then be assigned to tables according to ability. The One who seems to grasp the most readily will be placed farthest up the line, and the poorest at the bottom. Instructress to circulate back and forth between them constantly, until they seem to be doing the work satisfactorily.

Study to be made so that proper production is determined, and worker goes out on to floor when she reaches the proper figure.

When worker who leaves the head of the class to go on the floor is placed, she should be very carefully analyzed, and seated beside a woman of corresponding temperament, or at least such arrangement made that two personalities which will clash are not placed together. She should be introduced to her neighbor, and first name should be used.

Supervisor of group to be with head instructress, and take the worker into custody at this point.

Supervisor to work on the basis of prevention rather than cure, inspecting production constantly, to make certain that the amount of spoiled material is held at a minimum.

Two rest periods, or more if necessary of shorter duration, in the forenoon, and the same in the afternoon. Everybody to be required to stop work at that time, to get out, move around, have the windows thrown open, etc.

Girls on capping to be promoted through progressive arrangements of operations to positions as supervisors, and to inspection positions where need exists.

The actual statements the Instructresses are going to say to the girls should be worked out, so that they always say the same thing, and said in the spirit of a salesman.

(Mr. Williams): To get something started, I suggest that we get Miss Brown over here as Instructress and Ferelady, and let her work with some of the girls, let her learn some operations, some of Archer's job, until she is familiar with the work, and let her pick out some of the best girls for

examples. Then you have established a table as a group of standard workers, and you can say to the others, "This is what we want you girls to aspire to, to work up to the same speed that this other table is going."

(Mr. Charles Edison): But I would rather work out what we want her to do first, instead of having her come over, and simply say, "Go ahead and do the work."

(Mr. Jones): The first thing she must do is to decide which girls she is going to take first; and then in what units the groups should be, six, ten, twenty—

(Mr. Charles Edison): Another thing is how many supervisors there will be.

(Mr. Jones): That depends on production.

(Mr. Charles Edison): They won't be producers.

(Mr. Jones): They will be at least 40% producers. They will do a certain amount. We will say, "We will expect you to turn out so much production as an example to the others. When the girls get tired they should be stimulated by your example."

(Mr. Charles Edison): You would not expect the Instructress to be a producer.

(Mr. Jones): I would expect her to have a machine in front of her, and say, "We don't expect you to make things, that is not a part of your job, but it is a part of your job to encourage the others, and of course they cannot be expected to do what you cannot do yourself, or would not do."

(Mr. Charles Edison): I would not want to pay the supervisors piece-work.

(Mr. Jones): I would not either. Give the supervisor a bonus on the basis of the production of her unit. If the bonus be for improvement in work she would get part of the bonus for making it. Maybe the rates to the whole group should be on the gang basis. That should be considered. If we give gang rates and one girl stays out that spoils it.

(Mr. Williams): I want to get hold of Hosen or somebody, and get each of these operations, and see if there is any difference in production of different sized tubes. On some operations the speed is the same. For instance, on reaming it is a little slower on the 3/16 than on the 1/4 inch. I want to get those differences down and go right through the department, and make up an operation sheet, and show what we consider straight production, and what are the rates and what they should be able to earn.

(Mr. Jones): In proceeding to classify the jobs we should take the initial step and classify all the jobs in the plant. We should have that in mind, sooner or later we are going to set the jobs up on a proper basis. We will start with rough labor. A tool machine operator is in the same rela-

Tube Conference;

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tion to rough labor that 60 is to 40. Set these relations up. Then we can say our base rate is 40 cents an hour. Then it automatically follows that screw machine operators get a third more, or whatever that is. We ought to set up a relation in all of our plants. Whenever we change rates we merely change the base rates, and unless thereby something fundamentally wrong with the relationship do not interfere with it at all. That is something we have in mind doing.

(Mr. Charles Edison): We ought to immediately get busy on the dressing rooms and toilets. Whoever the man is ought to get busy. Would it not be a good plan to tell these girls that we are going to pick out one of the best a week from now—some girls to act as supervisors?

(Mr. Jones): I would first get them on the basis of seniority, and general all-round approachability, that is the first thing. They have to be approachable. Then the next thing is ability to describe, to teach. The next thing is term of service here. Before that I would get their own individual production back over a period.

(Mr. Williams): Take Miss Brown's operations. Start in the first operation—start pushing the production, and try to speed it up. Take the various steps, copying or whatever operation comes first, line that up, train the girls to see that they are all working toward one end, and have the fullest opportunity to get ahead. We will have time to judge just which is the best worker, and pick one girl to be over the whole group where she shows up best. Then take the best girl outside of her in that group and divide it into two sections. Then go on to the next group, and clean up that way, and get some one girl supervisor over each group who is to take every new girl and start her in and see that she is properly trained.

Conclusion: Miss Brown will start working in the capping operations until she is familiar enough with the operations to pick out the good workers who will be suitable for working supervisors as well as a woman to replace her as the head supervisor of the capping operations.

She will also determine whether it will be best to have a separate school of instruction for the new girls, or whether to break them in right on the job.

The matter will be further discussed with Miss Brown, Miss Goodwin and Miss Whittingham, at 9.30 Tuesday morning, June 11.

A. E. Williamson.

EDISON STORAGE BATTERY COMPANY
Memorandum

June 14, 1918

Mr. Chas. Edison,
Laboratory.

My dear Charles:

In reference to our conversation in the Library yesterday, I thought further to give you some real data as to why our production was really curtailed in the Edison Storage Battery Co. during the time we took on Government orders.

If you had consulted the minutes that should be available of the meetings held in the Laboratory, especially the Executive meetings, where we had a Secretary to take notes of everything that was said (I am not familiar as to what happens to these records but believe they should be accessible to you so you could get any information and use them at any time) you should have been informed as to the conditions and our inability to produce our usual schedule at each meeting.

In order to relieve you of going through these records, I am giving you herewith a report in detail.

In addition to this report I will have a sample of each order in the Library to show you what has been done; steel boxes, new type battery, and the non-spillable valve which had to be developed and tools made for same at a time when the Personnel Service Department was unable to secure help.

We are shy at least 40 men in our Tool Room today, all of which you were familiar with and I had written you a pleading letter to assist me, through the Personnel Department, to get help for the Storage Battery Company, or place someone in charge of the Personnel Department with ability to do so and work closer with the Edison Storage Battery foremen.

Following is my report:

1st: Production lost due to scarcity and poor quality of iron.
30% loss in production February 2nd to March 9th, 18,660 A-4 equivalent cells.

2nd: Production lost due to shut downs by Fuel Administration.
9 days @ 1750 per day, 15,750 cells.

3rd: Production lost due to lack of and inability to get help.
Running with average of 90% - 14,500 cells.

4th: Production lost on account of the necessity of changing over tools from 1/4" to 3/16" tubes. March 9th to April 13th, loss in cells, 12,500 and loss of stock of plates for 4,000 cells.

5th: Time lost by Tool Room on account of making up cells for Signal Corps by hand, by order of United States Government, thereby delaying our tool room in keeping up our tools and producing new tools. January, 120 cells for Liberty Motor; February, 140 cells for Signal Corps, 25% of Tool Room 3-1/2 weeks.

Noted 109

EDISON STORAGE BATTERY COMPANY

Memorandum

Chas. Edison

"2"

6/14/18

6th: Production lost through strike in Iron Load Department May 10th
1/2 day, 990 cells.

7th: Production lost through strikes in Tube Assembly and Tube
Loading departments weeks ending March 2nd and May 18th, 3,750 cells

8th: Production lost on account of help staying out. Average 8% of
total, 7,025 cells.

9th: Delay on account of non-spillable valve, six weeks.

Total loss of production due to above causes, 73,175 cells

CC S.H. Hambert
T.A. Edison

Robert A. Bradman

1597-BUREAU

Battery Storage

SECRETARIAL SERVICE DEPARTMENT OF ERIEON STORAGE BATTERY COMPANY

MEMORANDUM NO. 177

FUNCTION Erieon Storage Battery Co.

June 15, 1916.

MINUTES Export Division

Mr. H.G. Thompson,
Vice President and
Gen'l Sales Manager

for Mr. I.N. Davies
Office Manager

for Mr. W. Bremer
Bill Clerk

Yesterday I paid my first visit to our new Selling Division, the Export Division of E. S. B. Co. in New York City to go over their accounting, and in this connection several matters came up which I thought best to reduce to memorandum form for your information.

Mr. Stevens is in urgent need of a complete copy of our price list on parts. I understand that he sent a man here to make a copy of Mr. Bremer's book. I would advocate that the billing department of Export Division be given the same information as the billing department of the Selling Division, as they have the same problems confronting them in regard to making out invoices. Copies of all data which will be useful should be supplied them.

The shipping department is requested to date all packing lists for the Export Division with the date that the shipment is finished packed, regardless of whether the same is shipped or not. This information will be of material assistance to Mr. Stevens.

I would suggest that you have Mr. Yeale furnish Mr. Stevens each week with a list of orders ready for shipment. These possibly could be made up late Friday afternoon and mailed on Saturday morning so Mr. Stevens could have them the first thing Monday morning, which would enable him to plan his week's work.

---c00---

CC Mr. Van Nuise, Mr. Jacobsen.

ARTHUR MUDD, Secretary.
Erieon Storage Battery Co.

Mr. Lambert, confidential:

There is something radically wrong in the relations of the two selling divisions. It is too bad that we waste our time arguing about internal things when we should be devoting our energies to production and sales.

I spent a very profitable half day with Mr. Stevens. We went over matters with regard to accounting at the new Export Division of E. S. B. Co. and I think we are going to get along very nicely. Mr. Stevens wants to do things the way they should be done and the way we want them done, and it is certainly a pleasure to deal with a man of his type.

---c00---

Arthur Mudd
ARTHUR MUDD, Secretary.

Mr. S. B. Lambert;

June 19, 1918

DIRECTORS,
Edison Storage Battery Co.

I attach hereto copy of our contract with the International Nickel Company. The Government price of nickel has been established at 85¢ and the International Nickel Company advise us that we are the only one of their customers now paying less than the Government price for our nickel and have asked us to bring up our price on reduced nickel to 85¢ per pound at once. On the basis of our present deliveries of approximately 80,000 pounds per month, this would mean an increase of \$4,000.00 per month. Our present contract has 18 months to run. It is fair to assume that the increase will mean at least \$4,000.00 per month during that entire period.

They are willing to consider redrawing the contract on the basis of a further extended period at this time.

Your especial attention is invited to the two closing paragraphs of the contract. They make no claim with reference to their costs being greater from the standpoint emphasized in this paragraph; that is, Governmental restrictions in the import or export of materials. These have remained unchanged and any change which would affect us would naturally affect their entire operation so that this clause is not pertinent at this time. The final clause of the contract is, of course, a very particular one and reduces the contract to the instant back of it.

The International Nickel Company have always been able to deliver material as rapidly as we needed same and they now advise me that they will continue to do so just as long as our account is paid promptly within the ten day period and they cannot make shipments if there are unpaid bills on hand when shipment must be made and on this platform they stand.

The very advantageous feature of the contract is the fact that our needs are covered in a very peculiar way with a minimum of 5,000 lbs. per contract year and a maximum of 2,000,000 lbs. per year. The question presented is whether or not it is good business policy since our requirements are confined to one source of supply and grant them the increased price which would cost us in round figures \$72,000.00 under the unexpired term of the contract and negotiate a new contract subject to decline when prices return to a more normal condition or to insist upon the filling of our contract, permitting us to meet the situation as we best may with the International Nickel or another possible source of supply on January 1st, 1920.

RECOMMENDATION: If the Directors of the Edison Storage Battery Company feel that a new source of supply can be made available by the first of January 1920, the undersigned recommends that we stand on our contract price. If, however, we are tied indefinitely to the International Nickel Company, I then believe it the course of wisdom to grant the desired increase at this time.

I promised to advise the International Nickel Company our conclusion in the premises not later than the 27th of June.

A C Evans

ACB:RJR

[ATTACHMENT]

The International Nickel Company
43 Exchange Place,
New York City

AGREEMENT dated June eighteenth 1934.

THE INTERNATIONAL NICKEL COMPANY, hereinafter called the "Seller," and
EDISON STORAGE BATTERY COMPANY of Orange, New Jersey, hereinafter called the
"Buyer", do hereby agree as follows:

During the period beginning January 1st, 1935 and ending December 31st,
1939 the Seller shall sell and deliver to the Buyer, and the Buyer shall pur-
chase from the Seller, upon the terms and conditions hereinafter set forth,
all the nickel in any form or combination which shall, during said period,
be used in manufacture in any works which the Buyer may, either directly or
indirectly (as by stock ownership), own, operate, lease or control; PROVIDED,
however, that the amount of such nickel shall in no event be less than 2,000
lbs. per contract year, and that the Seller may elect not to sell and deliver
to the Buyer in excess of 2,000,000 lbs. per contract year.

The Buyer shall give to the Seller at least thirty (30) days written
notice of its nickel requirements. Should such requirements exceed
100,000 lbs. in any calendar month at least sixty (60) days such notice
shall be given. The Seller shall fill all orders with reasonable promptness.

All nickel deliveries hereunder shall conform to the following spec-
ifications:

FORM: Reduced Nickel; Metallic Nickel in Shot, Plaquettes or Blocks;
and Metallic Nickel in Bars 1-1/2" x 2-1/2" x 30" or 1-1/2" x 5" x 20".

QUALITY: For Reduced Nickel 95% Metallic Nickel Contents, For Metallic
Nickel as above 99% Nickel Contents.

All cobalt contained in nickel delivered hereunder shall be con-
sidered to be, and shall be paid for as, nickel.

The Buyer shall receive and pay for all nickel deliverable hereunder
according to the following terms and conditions:

PRICE per pound: For Reduced Nickel 80¢; for Metallic Nickel as above 85¢

TERMS: Net cash ten days from date of Seller's invoice; payment to be
made to Seller, or to any agent expressly designated by Seller to receive
such payment, in funds payable at par in New York City.

All nickel deliverable by the Seller hereunder shall be delivered
F. O. B. Cars at Seller's Works, at Bayonne, N. J.

[ATTACHMENT]

If, at any time, and so long as, the Government of the United States, the Dominion of Canada, or any of the latter's provinces shall in any way restrict or affect the import or export of nickel ore, copper nickel ore, nickel matte, copper nickel matte, nickel oxide or nickel metal and thereby increase the cost of finished nickel to the Seller at its delivery point at Bayonne, N. J., the Seller may increase the price of all nickel deliverable under this contract by the amount of such increase of cost. The Seller shall, however, give written notice to the Buyer of any such increase of cost and the Buyer may thereupon within thirty days of the receipt of such notice terminate this contract by giving written notice to the Seller of its desire so to do.

If, for by reason of acts of God, strikes or other causes beyond its control, the Seller shall be unable to make delivery of nickel hereunder, or if, for similar reasons, the Buyer shall be unable to receive deliveries hereunder, this agreement shall be suspended so long as such conditions shall continue.

THE INTERNATIONAL NICKEL COMPANY

(signed) W. A. Postwick

ASSISTANT TO THE PRESIDENT

(signed) Thos. A. Edison, President

for

EDISON STORAGE BATTERY COMPANY



Battery Storage

Purchasing Service Department Memorandum;

In reply refer to:

A1

June 28, 1918.

Directors: Edison Storage Battery Company.

Subject: International Nickel Company.

The undersigned desires to report the result of a further interview with the representative of the International Nickel Company. Mr. Lawson stated that at the request of the Government he had visited Washington last week, and had been instructed that the shortage of nickel made it necessary for them to very carefully allocate every pound of nickel available, at least during the remainder of this year, and he wished to know just what use we were making of the nickel they were furnishing us, I explained to him in detail, and he has assured me that they will treat every phase of our requirements as absolutely essential, and rate us on deliveries accordingly.

The International Nickel Company will manufacture anodes in accordance with any reasonable design which we may submit, and in consideration of this they ask that if an economy is effected that we grant them an increased price from 35 cents per pound to 38 cents per pound, the latter being the Government price.

Mr. Lawson agreed upon my explanation that since we have approximately \$3,000,000.00 worth of unfilled orders on which we would suffer a loss of approximately \$30,000.00 if we increased reduced nickel from 30 cents a pound to the Government price of 35 cents a pound, that in consideration of our agreeing to the increased rate, following our present commitments, they would continue deliveries this year at contract price. This would mean the new price would be effective about January 1st.

The International Nickel Company wish us to study our shot nickel situation and ask if we cannot use a lower carbon nickel, as there is a particular need for the high carbon shot nickel we are now receiving.

I promised to submit the foregoing facts to the Board of Directors, and to advise Mr. Lawson of your final decision in the matter within a fortnight.

Respectfully submitted,

(Signed) A. C. Emery.

AOE:EF

"Marsh: Wish to thoroughly know about this situation.
Return this after thorough investigation.
"Mamert."

2000-100000

EDISON STORAGE BATTERY COMPANY
MEMORANDUM

August 29, 1918.
LL/RS

Mr. Meadowcroft:

Please advise Mr. Edison that for over two months I have been trying to obtain some nickel hydrate with bismuth added in order to carry out the tests he wanted made.

Orders were sent to Silver Lake two months ago and several additional requests for this material have been made, but every request has been met by the statement that no bismuth is obtainable. This is probably true, and this note is not to complain of the Chemical Works, but to advise Mr. Edison that I have neither forgotten nor neglected this experiment.

As soon as the necessary materials are delivered, I will begin these tests immediately.

LAMAR LYNCH.

EDISON STORAGE BATTERY COMPANY

Memorandum

August 29, 1918.

LL/RS

Mr. Charles Edison:

Pursuant to your request, I am suggesting a general policy for conduct of Research Department.

(1) The labor market demands that women - not girls - be substituted for the present staff of observers.

The young men now in the Department appear to have no interest in their work and when under no authoritative observation, spend their time in sky-larking, yelling and swearing to such an extent that even the neighboring residents have complained.

This condition has not improved, but is, apparently worse.

(2) The male staff should consist of:
(a) One Head of the Department who would oversee it, and be responsible for its conduct and results.

He should have some reasonable hours in the daytime and be required to visit the Department at least 3 times weekly at night and have a general idea of how the work is being conducted during the night shifts. He should be a man of sufficient age to command the obedience of the staff under him and compel efficient work.

He should be something of an electro-chemist though not necessarily a skilled one. Mr. Petersen and myself can furnish the needed knowledge if the Head knows enough to understand the principles and reasons for suggested investigations.

Such a man would be about 35 years old and at the present, rates of employment would cost about \$65.00 per week.

(b) One assistant to the Head of the Department. Mr. Cook would be an excellent man for this. His hours should not be exactly the same as those of the Head. He should report about 2 hours later in the morning and stay 2 hours later in the evening, so that there would be 10 hours each day of practically direct management by the Head and his Deputy.

(c) One Man to take charge after the assistant Head leaves. Albrecht would be a good man.

(d) One Man to take charge after second man (c) leaves. He would stay until the assistant would come in on the following day and in this way have 2 hours on duty while the Head is in the office. He can report and discuss the work of the previous evening with the Head of the Department, so that the responsible manager would be in personal contact with 2 of the 3 shifts.

(e) One man for plotting curves and doing other work of a like character. Day shift.

EDISON STORAGE BATTERY COMPANY
MEMORANDUM

August 29, 1918.

LL/RS

(2).

(f) One assistant for two night shifts. That is the one man would come on after the first night shift and stay until two or three hours after the second night shift had come on.

(3) The female staff would consist of such a number of women as the conditions would require. One of these, on the day shift, should be a good stenographer and typewriter so that all notes could be neatly kept and in triplicate. She should also file records and keep up all file indexes. The general specifications for these women would be:

- (a) Not under 25 years old, preferably over 28.
- (b) Neat, clean and careful of their persons. Only women of this type will be careful about making exact observations of scientific experiments.
- (c) No "good lookers". The less personally attractive, the better for the work.
- (d) In case matrons are required for the night shift, they should be middle aged, say 38 to 42 years old. Young women could not exercise the requisite authority. Old women have not enough energy.

Matrons in every case should perform work and have regular duties in addition to supervision of the female staff.

These suggestions would of course be modified after a little practical experience in running the Research Department after the manner outlined.

LAMAR LYNDEN.


Battery - Storage

EDISON STORAGE BATTERY COMPANY INVENTORIES AS AT AUG. 31, 1918.

EDISON CHEMICAL WORKS DIVISION

<i>600-Tons</i> <i>what kind?</i>			
Material & Supplies			
Reduced Nickel	19,800.00		
Tube Ends	30,800.00		
Iron	36,700.00		
Sheared Bars	2,800.00		
Mercury	2,900.00		
Acids	7,100.00		
Oxides <i>(Banned New Charge)</i>	22,300.00		
Potash	4,200.00		
Soda	5,200.00		
Coke	5,700.00		
Fuel Oil	1,800.00		
Mill Supplies & Misc	<u>46,700.00</u>	\$ 191,500.00	✓
Work in Process			
Nickel	123,780.00		
Iron	80,800.00		
Chemicals in process	<u>29,800.00</u>	213,500.00	✓
Finished Stock			
Iron	59,400.00		
Nickel	36,700.00		
Mercury Oxides	5,800.00		
Reclaimed Iron	900.00		
Anodes	<u>1,100.00</u>	<u>104,900.00</u>	✓ 509,900.00 ✓
Phenol Resin & Wax Dept			
Material & Supplies			
Phenol	14,100.00		
Cartons and cases	5,700.00		
Stearic Acid	<u>4,600.00</u>	24,400.00	✓
Work in Process			
Blanks	8,800.00		✓
Finished Stock			
Blanks		<u>12,500.00</u>	✓ <u>41,700.00</u> ✓

MANUFACTURING DIVISION

<i>3750</i>			
Material & Supplies			
Steel	450,000.00		✓
Tool Room stock	9,700.00		
Mill Supplies & Misc	55,100.00		
Lumber	<u>34,700.00</u>	\$ 547,000.00	
Work in Process			
Finished cells assembled	89,300.00		
" " filled	289,300.00		
Rubber parts	116,100.00		
Hydrate	40,400.00		
Iron	56,100.00		
Steel Parts	<u>789,700.00</u>		

2.

Rolling Mill Dept	10,200.00		
Box & Tray Dept	14,000.00		
Manufacturing orders	133,400.00		
Jobbing orders covering work for various Div's	<u>47,500.00</u>	<u>1,544,000.00</u>	2,091,000.00
SELLING DIVISION			
Finished Stock			
Finished cells assembled	2,500.00		
" " filled #1	285,500.00		
" " " #2	21,200.00		
3rd class " in transit	4,300.00		
Parts	48,000.00		
Trays	1,700.00		
Battery Rental	8,500.00		
House Lighting Equip	2,500.00		
Mine Lamp Accessories	1,400.00		
Stock at New York	11,100.00		
" at Chicago	9,200.00		
Cells on consignment	<u>16,600.00</u>	412,300.00	
Repair Department			
Work in process	5,600.00		
3rd class cells	<u>14,700.00</u>	<u>20,300.00</u>	432,600.00
Repair orders			
EXPORT DIVISION			
Finished stock ready for shipment		2,600.00	2,600.00
POWER SERVICE DIVISION			
Coal	31,000.00		
Repair parts & supplies	<u>3,000.00</u>		<u>34,000.00</u>
			3,111,800.00
CONTROL DIVISION			
Reserve for			
Int. on Investment	129,000.00		
Administrative Exp	27,000.00		
2nd class cells	22,000.00		
Slow moving & obsolete stk	<u>60,000.00</u>		<u>228,000.00</u>
			2,863,800.00
EDISON STORAGE BATTERY SUPPLY CO.			
Pacific Coast	72,300.00		
Boston	5,100.00		
Philadelphia	600.00		
Control, battery rental	<u>51,400.00</u>	<u>129,400.00</u>	
			\$3,013,200.00

TOTAL \$3,013,200.00

St. Battery Supply

EXPERIMENTAL AND DEVELOPMENT ENGINEERING SERVICE
LABORATORY OF THOMAS A. EDISON.

Battery Storage
Edison Storage Co.

TO: Mr. Charles Edison

REFER TO MEMO #2-106

SUBJECT: Storage Battery Engineering Department

DATE: September 18th, 1918

REFER TO:

FROM: John F. Constable

SPC
This looks ok -
See H. Smith
+ then we
are together.
10/24/18

Being a very cold and wintry day I am confined to my office and am consequently getting down to my promise of writing out for you my ideas in connection with the Storage Battery Engineering Department, as per our conversation of last week.

I quite agree with you that the Engineering Department of as large a Division as the Storage Battery should come directly under the General Manager of that Division and be responsible to him, and yet be connected with the Central Engineering Head to promote the standardization of methods and the most economical use of general engineering facilities.

My recommendation is that you establish an Engineering organization in the Storage Battery along the following lines:

- 1 - That you appoint a Product Engineer.

If the Storage Battery Company were entirely separate from any other Company the Product Engineer would probably have the title of Chief Engineer, but to avoid duplication of titles, and in order that the centralization scheme may be worked out, I would suggest using the title "Product Engineer".

I recommend that Mr. Harold Smith be appointed to this position, and that he report directly to you, or to whoever you put in charge of the Storage Battery, but he would be affiliated with me, as Chief Engineer, and with the Product Engineers of other Divisions for our mutual cooperation and benefit.

The Product Engineers' duties can best be summarized by saying that he is Mr. Edison's direct representative in that Division, and should consider the engineering end of the business as a whole, as Mr. Edison would if he were there in person. In other words, the Product Engineer should keep in touch with the Sales Department and the performance of the product in the field. He should also keep in touch with the Manufacturing Department as to methods of manufacture to produce uniformity, production and low costs, consistent with quality up to Mr. Edison's standard.

In order for him to fulfill these functions it will be necessary for him to have experimental facilities and research facilities for determining causes of irregular performances either in the field or in the factory, and also testing facilities to assure himself of the Copies to:-

EXPERIMENTAL AND DEVELOPMENT ENGINEERING SERVICE
LABORATORY OF THOMAS A. EDISON.

TO:- Mr. Charles Edison REFERENCE TO MEMO. # 12-06
SUBJECT:- Storage Battery Engineering Department DATE: September 18th, 1918.
REFER TO:-
FROM:- John F. Constable

-2-

uniformity and quality of the product.

I would recommend that you outline the following organization:

- 1 - Mr. Harold Smith as Product Engineer. Reporting to Mr. Smith and Experimental and Research Department, now represented, I believe, by Mr. Lyndon.
- 2 - A Development Department, as now represented by Mr. Peterson's activities.
- 3 - A Testing Department, as now represented by Mr. Cook, and the present Research Department.

I believe that this end of the business should not be called "Research" as it is really check testing the various products and is largely a routine matter.

With these three main functions directly under your Product Engineer, I believe that you should leave the details of working this organization out to him.

As the Storage Battery Manufacturing Department is so closely allied to the Storage Battery Chemical Works, I would also recommend at the same time that you appoint Mr. R. H. Cox, Product Engineer for the Chemical Works, and that he be given the responsibility and authority necessary to fill that position. Mr. Cox already has, through the Laboratory Organization at Silver Lake, the necessary experimental and research facilities, and testing facilities.

It is my idea that the Central Laboratory, with Mr. Stewart as Manager, will furnish the necessary facilities along these lines for the Product Engineers of the Silver Lake Divisions. Mr. Cox and Mr. Smith, of course, will be very closely related.

I have talked this organization over with Messrs. Stewart, Cox, Smith and Monahan and the above is endorsed by them all.

In our conversation you brought up the question "or how far the Product Engineer was interested in process and manufacture?" The Product Engineer is naturally interested in everything pertaining to his product, and should have at any rate an advisory say in such matters. Consequently, I think it would be advisable to ask Mr. Smith to appoint a Manufacturing Committee in the Storage
Copies to:-

EXPERIMENTAL AND DEVELOPMENT ENGINEERING SERVICE
LABORATORY OF THOMAS A. EDISON.

TO: Mr. Charles Edison 171 12-106
SUBJECT: Storage Battery Engineering Department REFER TO MEMO. #
REFER TO: _____ DATE: September 18th, 1918.
FROM: John P. Constable

-3-

Battery, consisting of himself and Mr. Monahan, Mr. Romeo Smith, and any others whom he may need so they can frequently discuss the various problems which are so closely inter-related.

I trust the above will meet with your approval, and I am sure that if you will start Mr. Smith and Mr. Cox off with the proper "punch" that the organization will work itself out very smoothly.

JPC:GAF

Copies to: file:

1935-2-5M-1217

Edison Storage Battery Co.

CHARLES EDISON
OWNER
OF THE BATTERY

THOMAS A. Edison

ORANGE, N.J. U.S.A.

OFFICE OF
VICE-PRESIDENT AND FINANCIAL EXECUTIVE

THOMAS A. EDISON PRESIDENT
E. C. HANCOCK SECRETARY
ROBERT A. HANCOCK TREASURER
H. C. THOMPSON GENERAL MANAGER
H. F. MILLER ASSISTANT MANAGER
ARTHUR WOOD SECRETARY

December 27, 1918.

Dear Mr. Thompson:

Peace talk brings with it a train of discussion which in business circles sooner or later gravitates to whether or not sales prices should be decreased and if so, when they should be decreased. Already prices of automobiles have in some cases been greatly cut, with more to follow.

With this in mind you will no doubt be interested in my thoughts on the matter of price reduction at the present time and since the Harmon Automobile Company has already given voice to some of my thoughts, I am passing them on to you.

Looking at the matter from the true standpoint of the fundamentals underlying price reduction we find -

- (1) There has been no reduction in the cost of labor and materials entering into our Edison Storage Batteries. Not only that but we must contract now for materials to be used some time hence. THE MATERIAL MARKET AT THIS MOMENT IS HIGHER THAN IT HAS EVER BEEN, therefore, materials entering into our product must be purchased at the top price. The price of labor you know has not decreased, therefore there can be no reduction in our selling price due to the reduction in the cost of material and labor.
- (2) Sometimes an over-supply of products must be sold, regardless of their cost (the law of supply and demand). This is not the case with the Edison Storage Battery in view of the fact that in our case there is an over-demand to the extent of our entire output for several months. Therefore the law of over-supply cannot be the cause of our reduction in price at this time.
- (3) In some lines of business, prices were set unduly high to be slashed later for effect; in other words so as to have a fictitious high price to lop off at the first cry of peace. In no case does this apply to the Edison Storage Battery, inasmuch as our prices were naturally increased where increased costs absolutely forced it and then not until the last minute and at the time when our previous costs were untenable. Therefore, having no fictitious prices to remove we cannot reduce our prices on this score.
- (4) The substitution of inferior materials and the reduction of labor entering into the manufacture of our Batteries might afford

another cause for price reduction. The policy behind all products of the Edison Laboratories does not permit us to lower the qualities of our materials or workmanship in order to market an inferior product. Therefore, since we cannot substitute inferior materials and labor, we cannot reduce prices on that score.

Summing up, therefore, there is no reduced cost of materials and labor; we have no over-supply of our product; we have no fictitious high price to lop off; and we will not substitute inferior materials or labor; therefore it is not possible to reduce our selling price. It naturally follows that anyone purchasing Edison Storage Batteries has a stabilized investment in the future as well as in the past.

Markets

Carbon Copy to - Messrs: Thomas A. Edison,
Charles Edison.

Battery Storage

Edison Storage Battery Co.

CHARLES EDISON
Chairman
of the Board

THOMAS
Edison

ORANGE, N.J., U.S.A.

THOMAS A. EDISON, President
K. B. HANBURY, Treasurer
ROBERT A. BARNETT, Secretary
K. S. THOMSON, General Manager
H. P. MILLER, Vice-President
ARTHUR MUDD, Secretary

OFFICE OF
VICE-PRESIDENT AND GENERAL MANAGER
Gen. Sales Mgr.

Copy sent all Salesmen
TO ALL BRANCH MANAGERS:-

CC to Mr. Mambert.

January 3rd, 1919.
HOS-2-11

Dear Sir:-

With this, the beginning of the calendar year, and with the approach of our new fiscal year, I deem it opportune to review the past 12 months and briefly give you some idea as to what may be expected in the way of deliveries and what it will be our duty to dispose of for the next 12 months—especially from the first of March to February 28th, 1920.

During the past 12 months we have, as you know, had our hands full executing Government orders, which have upset our commercial deliveries; and as a matter of fact so disturbed our production of standard types that we never have known just what we could ship to manufacturers, or when.

The War Industries Board, together with the Fuel Administration, restricted our output for ordinary commercial purposes in order to divert as much of our production to essential Government purposes as they deemed necessary in stimulating the output of coal and other necessities as a war measure. It was naturally our patriotic duty to take care of the Government requirements first. It may be new to you, but true nevertheless, that with the exception of batteries for industrial truck and tractor use, we did not of ourselves solicit direct Government business. The Radio Development, Aircraft and kindred departments of the Government, placed large orders with us for small types, such as the L's, M's, W's, B's and J's, and G4, such that for some time our 3/16" tube production with every possible facility at our command was given over to the manufacture of the above types for Government requirements. We were hard hit in the matter of labor, as was every industry in this section, and not alone was it impossible to secure labor at any price, but the tool makers of this section went on a strike for almost prohibitive hourly rates, and with the Public Service output of current for all but direct Government purpose curtailed, and even with us curtailed to quite some extent, you can realize that business "as usual" was impossible. We have been criticized by some manufacturers very severely for non-delivery, but these criticisms in some cases were based on the selfish motives of those who would first their own interests first, and with but little thought of either the Government necessity nor of their competitors' rights or needs. Every energy and every resource were bent to the one purpose. Not for a day until Peace came were we left in doubt as to our line of action.

"In a day when it was expected that the War would still be its whole business the Nation suddenly faced Peace and now enters a year beset with problems. There was Leadership in war, but Industry must find its own way through the adjustments of Peace. In Special Year is ahead. Something more than Optimism must be brought to tasks that will be greater even than those of War-----".

Courage, Insight and the Determination to win must mark every conscious action of ours during the New Year.

Our production of batteries for Government war purposes is practically at an end. We still have left some undelivered orders but the next few weeks will see these out of the way and we can begin to see our way clear to turn our entire output over to the commercial interest, whom in a measure it might seem we have neglected.

With the above tasks accomplished we must concentrate on ways and means to secure new business along our accustomed lines of activity and bring to bear our utmost intelligence in dealing with the problems that will confront us. The art of selling will call for our greatest resourcefulness, and as never before. There is a tendency to wait and watch for lower prices and to use this as an excuse for idleness of business. One only has to reflect as to his own living expenses to obtain the answer. Labor costs have not been reduced, nor will labor stand a cut for some time to come, if ever, with the possible exception of special war workers who were necessary at any price. The material market does not show any particular tendency to reduce prices. We cannot judge of lower prices from what a few of the automobile manufacturers have done, for their increased prices during the last year were based somewhat on their decreased production as made imperative by order of our Government; and now that the limitation on their output has been partially withdrawn and re-adjustments made, such that the manufacturers can produce in greater volume, and the outlook ahead for their former regular production bright, they have in some cases announced reduction in price.

It is agreed by some of the large industries that steel being the prime part of our cell, and that as steel will be reduced in cost, that we should reduce our prices. Let me say for your information that the entire cost of steel entering into an A4 cell costs but 8%. Therefore reduction of any consequence in the cost of steel would have no effect whatever in our prices.

When food stuffs, hats and shoes show a substantial reduction in price we can possibly expect a reduction in our prices, but as long as we pay \$8.50 for a former \$5. hat, and \$10. to \$12. for a former \$5. pair of shoes, there is little chance for the customer to expect a price reduction for some time to come. Spot lead is lower somewhat in price than formerly, but with lead at 6-7 and Antimony at 8, with the high costs of lead-oxide and labor, I do not believe you can look for a great reduction in price of lead batteries.

Our production of standard types I am happy to say is increasing week by week and the increase will be held as fast as gained. We are now producing a greater number of cells per day, both by types and in A4 equivalents, than ever before, much that we will have available a greater number of cells for distribution this year than in any previous year of our history. Our unfilled orders have been reduced and are being reduced at a satisfactory rate and within three months we will have completed our back unfilled orders and will have only our current unfilled orders on hand.

As of Jan. 1st, 1919 you may promise delivery of new orders in any of our standard types in from 90 - 120 days; by April 1st to 15th in from 60 - 90 days; and by June 1st in from 30 - 60 days. If delivery assumes an all-important aspect in any particular case I request that you refer the matter with full details to me and a special arrangement may be effected for an earlier delivery. Every District Office must not expect that every order can be made special, and therefore you must do your best to defer the delivery to the schedule of dates as given above.

The allotment of cells as given you for the first six months of our last fiscal year increased by 10% will be the number of cells which it is expected you will be able to

sell, and which it is necessary to dispose of. Competition this year will tax your courage to the utmost, but I believe that "Where there's a Will, there's a way" and I know that you will find a way.

If you can suggest any improvements as to our manner of doing business that will aid you, please do not hesitate to inform me. We will all have to work together and I respect of you your earnest and hearty co-operation with those at Orange and I can assure you that by mutual co-operation and assistance I know we can realize our ambition to perform the tasks set before us. The last two months orders have fallen far behind any previous two months during the last three or four years and therefore I wish to impress upon you the necessity for immediate action in securing new business. Put on your thinking caps and take a hitch in your harness and start out immediately and fill us full of new business. It has got to be done, so right about face and do it!

Sincerely,

Battery - Storage

MANUFACTURING NO.

DATE January 15, 1919.

EFFECTIVE March 1, 1919.

FROM-- Vice President and Financial Executive.

TO-- The Board of Directors, Edison Storage Battery Co.

SUBJECT: Conference of the Board of Directors, Edison Storage Battery Co., held January 15, 1919.

At a co-operative conference of the Board of Directors of the Edison Storage Battery Company, held this day, January 15, 1919, Present:

Messrs. Charles Edison, Chairman,	J. F. Mothman
Stephen B. Mambert	C. S. A. Williams
H. G. Thompson	J. V. Miller
H. F. Miller	Lucian A. Marsh.
Arthur Mudd	

It was co-operatively agreed that effective March 1, 1919, the fundamental principle would be carried out of recognizing the three main branches of the business, namely, Chemical Works, Manufacturing and Selling (the latter of which includes both Domestic and Export) as separate entities to the extent that all purchase agreements covering the supply of either finished product, or parts of finished product, or work with parts of raw material, or in connection with the manufacture thereof, should be supplied under a fixed price. Said fixed price to be established and presented at 2 o'clock in the afternoon of the Wednesday next preceding the new quarter.

- - - - - oOo - - - - -

It was decided that the function of the Secretary as definitely outlined in the By-Laws of the Corporation is to have general supervision over all the records of the Company, and that it is his duty to call to the attention of the Division Managers any irregularities or differences existing in their records, or any other matters which in his opinion should be drawn to their attention. It is entirely within the scope of the function of the Secretary, and it should be his duty to observe whether or not such matters as he may draw to the attention of our respective managers in accordance with the above are properly acted upon, and if any of these recommendations should not be acted upon, it becomes the duty of the Secretary--if in his opinion they are sufficiently important to warrant executive action--to specifically call the same personally to the attention of the Vice President and Financial Executive. After making the recommendations directly to the Managers and personally appealing to the Vice President and Financial Executive for executive action relative thereto, the Vice President and Financial Executive will assume responsibility therefore to the President and the Chairman of the Board.

Signed for the Meeting,

Stephen B. Mambert,

Vice President and
Financial Executive.

Telegram

Feb-18/19

W.H. Meadowcroft E

Inform Mambert
and Emory that I am
agreeable to deal with
Sherwin Williams.

Edison

19
 $\frac{120}{180}$

March 10, 1919.

Mr. Edison:

I spent a day and night in Washington last week, most of the time with our friend Butler, who was greatly pleased with my going down.

I saw Mr. Hanford. After various contingencies, he was transferred about two weeks ago and is now in the Historical Department of the Navy, under Admiral Kimball. He seems to be quite happy and contented.

Mr. Hanford thought you would be interested in the following extract from the "Radio Press Bulletin" dated October 13, 1918. He came across it in his researches and thought you would be interested, as it goes along way towards verifying your own views, which you expressed at the time you were down in Washington in 1917.

The extract is as follows:

"Admiral Sims addressing the American Editors visiting England said he asked Americans how many submarines they supposed were operating against merchantmen and transports and that he never got an estimate of less than fifty, sometimes one hundred. As a matter of fact the average was eight or nine, sometimes twelve or thirteen"

15 was seen
& measured 30
including
measurement

6

Measurements

- Mr. Edison:

Edison
Every one whom I see
asks how I am, so I say
that hearing of news to the
contrary, I ~~will~~ ^{feel} sure you
are quite well.

I hope you are enjoying
your vacation to the limit.
You certainly deserve it, for
you had 3 years hard work
without much rest or change.

Meataraof

3/13/19



ABSOLUTELY FIREPROOF

Battery-Storage

EUROPEAN

the Alcazar Hotel

43-45-47 W. 32ND STREET

JUST OFF BROADWAY

JOHN F. DOWNEY

MANAGING DIRECTOR

New York

March 14th 1919.

Mr Stephen B Hambert
Vice President
Edison Storage Battery Co
Orange N.J.

Dear Mr Hambert:-

I am in receipt of a very lovely letter from Mr Thompson with enclosure and wish to thank you personally for I know and appreciate that you are largely responsible for the same.

It has ever been a source of great help to me in my work knowing at least that YOU have a wider vision than most folk, and feeling that the day would come when you and I could perhaps get closer- thereby working towards what can only be a great big business by much broader policies than have prevailed.

I believe with you that the Edison Storage Battery Co's business has limitations only in proportion to a liberal view of the same backed up with courage, at the same time using care and good judgement.

There is one thing that worries me and that is our foreign business, which I am convinced will slip away from us the same as the Pleasure Vehicle business did because of the exclusive arrangements with the Detroit Co (Anderson). When the time arrives that my knowledge of this situation and the suggestions I think I could make for the benefit of the Co, are wanted I am ever at hand and ready.

Wishing you and yours the very best of health and a full measure of success you so well deserve, I am

Sincerely Yours,

Geo Drake-Smith

EDISON STORAGE BATTERY COMPANY

Memorandum

Desk #4-5-3005

April 23rd, 1919.

8

Mr. W. A. Meadowcroft, Confidential Secretary to
Mr. Thomas A. Edison.

Dear Mr. Meadowcroft:

I am attaching copy of telegram sent Mr. Edison on April 1st,
and also letter received by me dated April 12th from Mr. R. D.
Wagoner, President of the Elliott Fisher Co., Harrisburg, Pa.

Mr. Wagoner is Chairman of the Legislative Committee, as yet,
of the N. E. L. A., and we are going to have the largest Con-
vention ever held in Atlantic City May 19th to 22nd. If
Mr. Edison should feel like granting Mr. Wagoner's request, I
believe that such a statement would be of some service to us, as
Mr. Wagoner is the best known man in the Electric Vehicle business.

Personally, since I have been with this Company (a little over
3 years) and prior to the selling out of the General Vehicle
Company's interests, this Company, and myself were greatly
indebted to Mr. Wagoner for giving us largely increased orders,
and for a great many friendly acts that have since held us with
the Walker Company very successfully, and I personally feel
under obligations to Mr. Wagoner, and am grateful to him as I
was in the employ of his former company for several years.

Thanking you in advance for calling this to Mr. Edison's attention,
and asking for reply one way or the other, I am, as ever,

Sincerely yours,

Geo Drake Smith

*Meadowcroft - say accountancy
is out of my line of knowledge
& I prefer not to give an opinion
This is first time I ever heard
of Wagoner's suggestion* Σ

[ATTACHMENT]

April 24, 1919.

Mr. Geo. Drake Smith,
Edison Storage Battery Co.

Dear Mr. Smith:

The enclosed carbon copy of my
letter to Mr. Wagoner will explain itself.

I return, herewith, Mr. Wagoner's
letter to you and the copy of the telegram.

Sincerely yours,

Enclosures - 3.

CHARLES EDISON

DIVISION:

Memo. No. 16

SUBJECT: Electric Starter.

Date 4/25/19.

WNP
Mr. H. G. Thompson:

Referring to the Electric Starter that has been under development for some time, I believe that a big business will result from this if we can ever get it going, and it is our disposition to go right ahead with it and spend the necessary money to develop it if the starter is found satisfactory and practical.

In order that we may be in a position to take such action as we should take and push this right along, I would like to get from you the full story of this starter so that later on there may be no doubt as to who owns it, etc. The whole thing is hazy in my mind. What I would like is a sketchy story of the starter from its inception up to the present time.

CE/IWW

CHARLES EDISON.

LAWSON STORAGE BATTERY COMPANY

Memorandum

5-1-19 dic. 4-30-19
Desk #1

MR. CHARLES EDISON:--

SUBJECT: ELECTRIC STARTER.

The Electric Starter to which you refer in your memo #16, dated April 5, now owned and controlled by the Edgewater Equipment Corporation, of Portland, Me., was first brought to my attention some time in 1915. It was then known as the Jemmy Starter and then owned by a Mr. Oberreich and a Mr. Jemmy of Indianapolis, Ind. We came in contact with this through being called upon to furnish 5 cells of 24 for a demonstration which was then being made in Indianapolis in order that the then owners might demonstrate to their satisfaction the adaptability of Edison Batteries to this Starter, which it was hoped could be produced in large quantities at a low price and sold for gas pleasure vehicles as well as gas trucks.

The matters progressed for some little time. I discussed informally with your Father this Starter with the result that I had expressed to Orange two automobiles, one a Pathfinder and the other a Ford, to which these Starters were and had been applied for some time. We ran the Pathfinder to Silver Lake where your Father was then doing some special work that he might see the application and that we might get his ideas as to whether or not he thought it advisable for any of us as individuals of the Company to interest ourselves in the proposition. Your Father expressed the opinion only that the fundamental principals of this Starter were correct and if refined should make a good Starter and suggested to me that we follow this along for a time at least, the thought always most uppermost in our minds being that if we could help along in any way the organization of a Company to produce a Starter that we would naturally be the recipients of a considerable amount of business.

Some little time transpired when the Starter was more or less lost sight of when a Mr. Moulton, President of the Moulton Engineering Corp., of Portland, Me., became interested in the Starter and made an exhaustive investigation and report of the merits and patentable features of the Starter and he finally became interested in forming a Corporation to buy the patent rights and build a Starter. The Corporation was formed and he, Mr. Moulton, after several visits to Orange, induced a number of us to purchase stock and in discussing at this time, the matter with your Father he voluntarily suggested that he would like to interest himself at least in stock ownership. I think your Father, at that time, was inclined to invest a little more heavily than he did, but for some reason or other I rather had a hunch that he should not go very far from the fear that I had at the time that the promoters of the Starter would use him for the sale of stock and for other reasons to their best interest. I, myself, invested \$1,000, your Father likewise, Billy Bee \$500, and I induced John Miller, unfortunately, to invest \$500, for I believed at that time and still believe that eventually this Starter will be a success.

ELSON STORAGE BATTERY COMPANY

Memorandum

-2-

The first effort on the part of the Corporation was to get the Esterline & Angus Company of Indianapolis to redesign the Starter for the reason that they had in the early stages of the work been interested in the development. Unfortunately for the Corporation, Esterline & Angus Company spent a great deal of time attempting to redesign the Starter with but negative results and at the cost of quite a little money to the Tidewater Equipment Corporation. Matters went on for some little time unsatisfactorily there being little or no money in the Treasury, when I felt that as your Father had invested and as there was a possibility of great development for the Battery Company it was about time that someone did something and I, therefore, made arrangements for a simplified model to be built in the Lab., the Battery Company to pay the Lab. for the cost of this, which after satisfactory arrangements with the Tidewater Company, they arranged to reimburse the Battery Company just as soon as they were in a position to do so. This Starter was completed and developed some little kinks and was then forwarded to Portland, when Mr. Hanson of the Moulton Engineering Company undertook to again refine this Starter with the result that a model was developed and placed on a Ford car and operated for some number of thousand miles, to all intents and purposes, very satisfactorily. The War came on and it was then impossible to raise any money and, furthermore, no shop could be found who would undertake to further develop one or two more models and there the matter has rested ever since.

I forgot to mention that Mr. Geo. Drake Smith was financially inveigled to invest \$500 in this Starter because he believed it to be a good thing. Mr. Smith and myself being bad losers undertook to see what could be done to revive the proposition and as Mr. Moulton had disappeared due to financial and other embarrassments, we finally had a new Board of Directors elected which we could control for a year at least and on that Board were a Mr. Sanford of Boston an investor to quite some extent, Mr. Geo. Drake Smith and myself, and two others. The Starter in the meantime had been shipped to Indianapolis so that Mr. Oberreich, the original owner and a present stock holder, could prosecute the further development and sale of the Starter. Mr. Geo. Drake Smith and myself took it upon ourselves to push this thing to a conclusion of some kind and, therefore, had the Starter reshipped to Orange where it now is.

I discussed informally with Mr. Monahan the possibility of refining the Starter further with the assistance of Mr. Hansen, whom I formerly mentioned, here at our plant at Orange. I was about to take this matter up with you when I received your memo which has resulted in this letter.

I am firmly convinced that this Starter can be made a commercial success and would strongly recommend, in which recommendation I am joined by Mr. Geo. Drake Smith and Mr. Sanford of Boston, that we arrange to have Mr. Hansen come to Orange at the Battery Company's expense and either perfect this present Starter or build one or two more models concerning which Mr. Hansen has some new ideas and then arrange, provided they are successful, to have some firm manufacture this or possibly for a limited time and in a limited number have our own Company make these Starters

EATON STORAGE BATTERY COMPANY

Memorandum

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that the project may be carried on to a successful conclusion or entirely abandoned.

It must seem to you, from the foregoing, that having a financial interest in this matter I am desirous of getting my money out of it. This is true but with reservations. I feel somewhat guilty as it were, and please pardon me, for allowing your Father to become interested in this but my main purpose was not my own financial interest, although I was perfectly willing to share in any profits which might accrue to the Edgewater Equipment Corp., to build up a starter to which Eaton Batteries could be successfully applied and to try and help promote a Corporation which would manufacture the Starters commercially in large volume, realizing that if this could be accomplished that the Battery business in this one source alone would be enormous. I still have more than \$1,000 worth of interest in this matter and would strongly urge that you consider this matter carefully and permit at least for your own satisfaction the building of one or two models which could not in cost exceed for all items \$1,000. I am perfectly willing, as far as I am concerned, to sell my stock for one hundred cents on the dollar to anyone who is sufficiently interested to acquire it provided such selling out would be to the advantage of this Company in any way, shape, form or manner. I would be further very glad indeed to have you talk to Mr. Geo. Drake Smith or Mr. Harold H. Smith or to make any investigation that you might desire, but whatever is done by us must be done immediately or else I fear that the control of the patents will pass out of the hands of the present owners and some of our other competitors might be sufficiently interested to bury it or further develop it for their own interests.

H. G. THOMPSON.

HGP/RHC

FUNCTION Edison Storage Battery Co.

May 5, 1919

SUBJECT Capital Stock

CONFIDENTIAL

Agreed To Amend \$400,000 to \$500,000
Consensus \$400,000 to \$500,000

Mr. S. B. Mambert,
 Vice President and Financial Executive.

In the certificate of incorporation filed May 27, 1901 the authorized capital stock of Edison Storage Battery Co. was given as \$1,000,000, divided into 10,000 shares. The entire amount authorized was issued.

A certificate was filed October 7, 1910 increasing the capital stock from \$1,000,000. to \$5,000,000. the additional stock being like in all respects the stock before issued. Of the 25,000 additional shares authorized only 19,982 shares were issued at the time.

The last change in the capital stock was effected in November, 1917, when it was increased from \$5,000,000 to \$5,000,000., the latter amount being divided into \$2,000,000 of preferred stock and \$3,000,000 of common stock by changing 5,000 shares of common stock not yet issued into an equal number of preferred stock and by creating 16,000 additional shares of such preferred stock.

Of the 20,000 shares of preferred stock authorized, 18,013 shares were issued as of November 30, the balance of 1987 shares of preferred and 18 shares of common being not issued until February 26, 1919.

At the present writing all of the preferred and common stock authorized has been issued.

Thomas A. Edison owns 26,096 shares of the common stock and 19,592.33 shares of the preferred stock. Charles Edison owns 1,000 shares of the common stock and Mrs. Mina M. Edison owns 400 shares of the preferred stock.

You will recall in the last change of the authorized capitalization a somewhat involved arrangement was made as to the rights of the holders of the two classes of stock in regard to payment of dividends, and if it is proposed to further increase the capitalization by the issuance of additional stock, the subject will of necessity have to be given very careful consideration, as there will undoubtedly be a considerable difference in the rights of the stock which may be issued now as compared to that heretofore issued.

Will the additional stock, if issued, be common, preferred or second preferred?

1287-20817

SECRETARIAL SERVICE DEPARTMENT OF EUGENE STORAGE BATTERY COMPANY

MEMORANDUM NO. 256

FUNCTION

May 6, 1919

SUBJECT

-2-

The initial cost of an increase in capitalization will be approximately \$1,250., not including printing of certificates, if any. The cost would be divided about as follows:

Excise Tax - 5¢ revenue stamp on each \$100. certificate	\$500.00
State Tax - 20¢ for each \$1,000. increase	200.00
Filing Fees about	50.00
Legal Expenses about	500.00

The yearly cost would be \$1,000. represented by the Capital Stock Tax of \$1.00 for each \$1,000. of capitalization.

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ALVIN HUBBARD,

Secretary. ✓

EDISON STORAGE BATTERY COMPANY "Ford Starter"
ORANGE, N. J.

Doc# 14-P-3035

May 6th, 1919.

Subject: Tidewater Equipment Corp.

Mr. R. W. Kellow,
Secretarial Service Department,
Thomas A. Edison Research.

Edison Storage Battery Starter

Referring to your memorandum #4620, above subject, pursuant to Mr. Harold H. Smith's letter to you of May 1st, 1919, in re the same, beg leave to report:

While myself and some friends who are stockholders in the Tidewater Equipment Corp., were never kept well informed as to its progress, we were dissatisfied with the slow manner in which matters were being pushed, and I was glad of the opportunity to attend the stockholders meeting in Portland, Me., a few weeks ago. I arrived in Portland before the meeting of the stockholders, interviewing the Boston stockholders on the way, and was enabled at the meeting to go into the tide of affairs as to put us in virtual control of the Board of Directors, as I was elected as one of the directors, together with Mr. Robert W. Sanford, of Boston, who will cooperate with us, and two of the Portland people, who are only too anxious to cooperate with our interests for pushing the starter. Mr. R. G. Thompson was also re-elected as a member of the Board.

At the meeting of the Board, resolutions were passed giving the Board of Directors full authority to sell the starter and put it out on royalty or to proceed in any due manner to push the same. In so many words, full authority given. With that authority, and Mr. Thompson's consent, I proceeded next to see the Indianapolis people and to talk with numerous manufacturers resulting in my bringing back the starter from Indianapolis the same now being in our possession in Orange.

After all my investigations, I am so thoroughly convinced that the starter, with a few little changes in it, which can be done economically, by Mr. Hanson, who designed the last starter, and who has agreed to complete the same at a comparatively small figure (not to exceed seven to nine hundred dollars, written proposals for the doing of which I have furnished Mr. Thompson with) will be successful. This work should be done in Orange and in my opinion the starter should be made in Orange by the Edison Co., and called Edison Storage Battery Company starter. There is no question but what it will do the work all right with the 5 coils of J3 battery, and that the whole cost including the battery at \$25.00 and the cost of the starter at \$25 to \$30 would not exceed \$60.00, and the same can be sold readily for \$100.00 leaving a margin of \$40 for dealers, and I am so convinced that this could be made the means of selling immense quantities of batteries that I would be willing to undertake, with our Company, and two men to sell a million dollars worth of batteries the first year after the starter was ready to delivery.

All that we need to sell this million dollars worth of batteries would be to sell, or rather equip 2% of all the Ford cars that are now running with the starter, to say nothing of equipping more Ford cars rapidly.

EDISON STORAGE BATTERY COMPANY
ORANGE, N. J.

Mr. Kellow

-2-

In addition to the Ford cars, this starter is adapted to trucks, and is the only method to my mind which gasoline trucks can be properly started with. This would mean, of course, future development but would mean an enormous business. I have friends among the officials of truck manufacturers, the Packard Motor Car Co., and the Pierce Arrow Co., and other large gasoline truck manufacturers, and have every assurance from several of them that they would be glad when this was perfected to take it up.

Finally, the Tidewater Equipment Co., of Portland, Me., have some indebtednesses which must be paid, and in the event that we will complete this starter and make a few of them here in Orange to start the ball rolling, I have agreed personally to furnish the money to pay up all these indebtednesses and am perfectly glad to do it, but must have the decision as to whether we are to perfect this starter and, as I say, make a few hundred at once. The debts are pressing, and it would be a great misfortune to have anything happen to this company at the present writing.

In addition to these small debts, about \$700.00, there are \$2500.00 outstanding in notes. These I have arranged for several renewals on which will carry them as long as some activity is shown for future business for the starter.

GEORGE ORRIS SMITH.

CC to Mr. Charles Edison, Mr. S. B. Lambert, and Mr. H. G. Thompson.



S107 0 YAM

Edison (Battery
Storage)
Electric Iron

MAY 28 '19

June 19

Recd

Robert A. Bachman writes he has made it at Edison and it
worked well. Think both trials making
commercially. x. Would like to undertake it.

(Keep TLL var. 3? 4?)
in box for battery)

[ATTACHMENT]

(Battery -
~~Storage~~) (1919?)

Mr. Edison - Consulting Eng.

This looks interesting -
Profits are often the result
of proper use of by-
products. Should we
go further in development
of this product.

Yes fine
10/9

Say

Battery (1917)
Storage

In your Editorial about
June 7 1917

You ask what has become
of Mr Edison storage
battery 7/8 complete

The answer is that for
more than 12 years

this battery has been

used in large quantity

Three thousands men

used exclusively in making

them & nearly every

Railroad in the U.S have

for last 8 years used

them for lighting cars

many houses and electric

trucks are drawn by them

& they are a standard
article in thousands
of Industries.

[ATTACHMENT]

JONES' SHIPPING BUREAU
 NEW YORK, BOSTON
 BARRACLOUGH, 22 DEVONSHIRE ST.
 LONDON, ENGLAND
 ALL CONTINENTAL AND AUSTRALIAN
 CABLES, AIR, RAIL, ROAD AND LONDON
 TELEGRAPH, CABLE, RAIL, ROAD
 AND LONDON
 FRANKLIN, CHRONICLE, NEW YORK
 JULY 1910

THE TRANSATLANTIC FLIGHT—COURAGE AND SCIENCE.

Man's courage is equal to, any call that may be made upon it. This has been proven in war; it is now being proven in peace. Ascending into the hot air that swallows the globe and in frail aerial barks, men have crossed the stormy Atlantic. The honor comes to the United States under the tutelage of its Navy, Commander Rood in the NC-4 reaching Plymouth safely. In the case of the American planes, they were built for ocean voyages, and their ocean route was marked by a line of war strips so spaced as to be available for repairs if needed.

We steered by the smoke and scorching of the ships and the flares sent up, said the Commander of NC-4, which alone of the three machines starting from St. John made the first leg to the Azores without mishap. In the case of the English (Australian) aviator Hawker, mounting his small land plane, he really made his leap into the immensity of space with little to guide by save the stars and such nautical calculations as he might be able to make, trusting his life and success to the dependability of his machinery, the rapidity of his flight and his own endurance. All the world knows how, after flying 1,000 miles, his engine failing, he alighted safely in the sea, and was rescued. In each of these attempts courage of the highest order was necessary, and was possessed by all the men.

Secretary Daniels, on his return, said "the navy has been preparing for this for two years," and expressed the opinion that little was left to chance. The country, despite the added cost of ships otherwise idle, may well congratulate the navy on its achievement; and the English Admiralty, though the Sopwith machine and effort were but private enterprises, must feel some regret, even under the happy termination, that it made so few preparations; set up so few safeguards, in behalf of the intrepid men who staked their all in behalf of an arm of the "service" so important to ships at sea whether in war or peace. And yet when all is said, a flaw in the machinery, an unexpected tempest of weather may mean disaster and nullify all hopes. However, we trust our lives every day to machinery in motion, and to

constructions, in which the strength of materials, though tested, measures life or death. It is a fair conclusion, not only from these recent efforts, but from the general rapid growth of aeronautics in the past five years, that the air is conquered. Imagination may well picture the upper air filled with fleets of ships carrying men and his products, by the most direct route and fastest speed, to every part of the earth.

Progress, and we presume it must always be so, moves forward by uneven stages, and rarely along parallel lines. Power on these transatlantic air-planes is dependent upon explosive engines fed by gasoline, though they carry wireless telegraph and telephone. What has become of Mr. Edison's electric storage battery "3/4 complete" according to his own words in the "North American Review," so many years ago? Undoubtedly aeronautics is in its infancy, despite these prodigious facts that now so astonish and exhilarate us. We see man in his constructive moods. And while caution in experiment must depress unwarranted adventures based on almost incredible courage, the layman is encouraged in constancy and energy when he realizes that the one supreme object is to bring into more general usefulness a new achievement in transportation. So testing and so judging actual flight he still may harbor the hope that new wonders are in store.

It is now more than a quarter of a century since many, perhaps they were more scientific than practical, experimenters saw in the idea the model of a flying machine. And for centuries, we may say almost, the air was to be conquered by bird-men with movable wings. Finally the Wrights bridled their first gliding machines, one seeming principle of what is that motion overcomes gravity, and it may almost be said that to-day the aeroplane slides down the wind or skates on thin air, a sort of combination of the soaring eagle and lifting seagull. Somewhat power is translated into motion, though the axis of resistance is the light medium of air, and the propeller with its marvelous revolutions draws or drives all that is attached to it.

Speed is perhaps now a sacrifice to safety, and starting and stopping hardly more than makeshifts. Men have long observed the motions of the dragonfly—darting hither and yon like a flash, stopping instantly, poised in air, or settling gracefully and easily to rest, its winged power under complete control, and serving it far beyond the powers of airships to, serve man at this time. Perhaps the machine power of the airplane may be turned to new purposes, even as a more cogwheel transfers the direction of power and motion, and speed become a willing sacrifice to safety. At any rate, each new invention progresses more rapidly than the last by reason of the application of old laws to new uses.

The object developers of this science should obviously set themselves to it to make the new invention of service to man in a better and more abounding life. It is not "all of life" to crowd every experience into a few years. Life indeed may be extended by slowing it down and made more enjoyable by temperate use of things, opportunities as well as possessions. Collectively it may be well to compress a century into a day but individually it is well to stretch a day into a century. One man can no more possess himself of all knowledge than he can personally enjoy the fruits of all wisdom. There is a spiritual nature,

a serene contemplation; it is important, as a riotous physical progress. If this is true, a walk in the woods, endless of the passing of a day, may be more than a trip to London from crowded New York in twenty-four hours. To fly across lots at small cost in perfect safety to visit a neighbor may in the "simple life" outweigh all the stunts and aerial acrobatics which mark courage and a feverish desire to live fast may accomplish. Men were "brave enough" when the stage coach or prairie schooner crossed the plains and in their six months' journey developed between themselves as much humanitarianism as now hangs like a desert mirage above the smoke and waste of a world war. If more courage is to prove that it is not "all of death to die," it must look beyond—for self, and for others who linger on. To save a world by decimating and impoverishing it must over the open to question. And invention if it is to fill the world with peace and joy must become a practical helper rather than a spectacular and imbo.

THOMAS A. EDISON LABORATORY.

July 2, 1919.

Mr. W. H. Meadowcroft.

On May 1st you advised me that the fifteen (15) A-5 Cells which were delivered in October, 1918, to the Brooklyn Navy Yard for the use of Mr. Thomas A. Edison on Motor Sailor Boat No. 1208, were still on the boat. As two months have now expired will you kindly inquire as to whether these Cells are still on the boat and advise me accordingly.

As previously advised you, the Storage Battery Selling Division have these Cells on Consignment against us, amounting to \$435.60, which item we are desirous of clearing as soon as these Cells can be released. If Mr. Edison expects to keep these Cells in their present location indefinitely, it might be well to purchase same outright and charge the Government accordingly.

Your advice in the matter will be appreciated.

G. M. Ryder

LABORATORY OFFICE MANAGER.

*8/4 - Mr. Meadowcroft
on 6/3/19 1919*

*8/4 - Ryder to get consignment to
of present invoice sent 6/3/19 1919-143560
for 1511 on being Mr. Ryder;
cost of these cells
to Laboratory*

*Mr. Edison wishes these
Cells to remain on the Motor
Boat for the time being - He
will probably be making
some experiments with
them in the near future.
W. H. Meadowcroft*

7/2/19

LAMAR LYNDON
CONSULTING ENGINEER
~~NEW YORK~~

21 PARK ROW

Mr. Charles Edison.

Some time ago, Mr. Edison requested me to investigate certain phenomena in connection with the use of bismuth in the positive electrodes of the Edison battery.

I immediately put in a request for the necessary materials which were to be made at Silver Lake. After a considerable period of waiting I repeated my order, and then had the matter followed up.

I was finally advised that Silver Lake had no bismuth, could not obtain any, and that the chemists there were not prepared to make up the materials required even if the bismuth were available.

I understand the Mr. Pedersen can provide as much bismuth as will be needed, and in the desired form.

I suggest that you authorize him to prepare the bismuth at once, so that I can begin the experiments. I will leave the necessary instructions for the continuation and completion of the tests, after August, if I am unable to finish them during the present month.

Mr. Pedersen or Mr. Dobyne could carry on the work if necessary.

Lamar Lyndon.

Mr. Edison -

What do you want done?
Should Lyndon do it?
How about Blair?
July 4th 1919

Charles -

Not necessary about Bramm
I am going to do it
myself - S

BATTERY-
STORAGE

July 9, 1919.

Mr. Lamar Lyndon,
21 Park Row,
New York City.

Dear Mr. Lyndon:

I referred to Mr. Edison your note of the 4th instant in reference to bismuth, and he has returned it to me with the notation that he himself intends to make some experiments, presumably for the same purpose, and it will therefore not be necessary to arrange for the bismuth to conduct the experiments you have in mind, at least not for the present.

Faithfully yours,

7/28/19

Father -

Brother will be
at Belknap Hotel Chicago
tonight if you
want to wire
her -

Sent M. W. 7/29/19
8:30 PM W.M.

Mrs. J. A. Eason
Hotel Blackston Chicago

Everything right here
hope you had pleasant journey
and far.

Belknap

are you going to

give me chart of
22B so I cannot

strengthen a cut.

down drop of

Village - & how soon
can't expect it -

Don't do anything
but prepare chart &

If you have ~~enough copies~~
~~of songs~~ published by you
that are older than 20 years
I will pay 15 cents each
for a ~~set~~ set, no duplicates
wanted

572
New York City.

August 16, 1919.

502

Mr. Charles Edison,
Chairman of Board of Directors,
Edison Storage Battery Co.,
Orangeth, N.J.

Dear Mr. Edison,

Edison Accumulators Ltd. was incorporated and financed under and by reason of the original contract of September 20, 1913 and its amendment of August 22, 1916.

In May, 1919, 166,000 Pounds Stg. of additional capital was subscribed for at par by my associates Explosive Trades Ltd. (which has a paid up capital of 30,000,000 Pounds Stg.) on the same contract.

Even if I desired to do so, I could not cancel the existing contract and accept the new contract you propose without making myself liable to the shareholders of Edison Accumulators Ltd.

In the conference of August 15th. I explained to you the existing business conditions and the necessity for co-operative effort on the part of ourselves, i.e., Edison Accumulators Ltd. and Edison Storage Battery Co., to meet them.

I am submitting, at the forthcoming conference of August 16th., an amendment of the existing contract, with an earnest effort to meet some of the objections you have raised.

Your General Manager stated, at the conference of the 15th. inst., that you are not interested in any further business from Edison Accumulators Ltd. on the basis of the present contract. This is unfortunate because, in the event of an impasse, further relations between us are apt to prove unsatisfactory.

If such an impasse is found to exist, I can see no solution other than that the Edison Storage Battery Co. should purchase the Edison Accumulators Ltd., or, conversely, the Explosive Trades Ltd. and myself should purchase the Edison Storage Battery Co. I am prepared to negotiate on such one of these propositions as may appeal to you.

I think it best to address you in this matter by letter rather than incorporate it in the proposed conference.

Yours faithfully,

EDISON ACCUMULATORS LTD.,

Managing Director.

[ATTACHMENT]

*Amendment proposed by Monnot Aug 16/19,
+ transmitted to ESBA by Monnot.*

The contract between Thomas Alva Edison, Edison Storage Battery Co., Edison Accumulators Ltd. and John Ferreol Monnot, dated Sept. 20, 1913 and the Amendment thereof dated August 22, 1916 are hereby amended as follows, as of the date of this letter.

- 1: Edison Accumulators Ltd. agree to forthwith appoint a resident sales agent in New York, authorized to sell Edison Storage Batteries to American Manufacturers and Importers for shipment to Edison Accumulators Ltd. territory, and the Edison Storage Battery Co. agrees to supply Edison Accumulators Ltd. complete batteries of formed cells to fill such orders, and such parts and accessories as may be required thereby, and to invoice same to Edison Accumulators Ltd. on the terms of the said contract and its amendment.
- 2: The Edison Accumulators Ltd. resident sales agent will be authorized to quote the Edison Storage Battery Co. list prices on all inquiries for export to Edison Accumulators Ltd. territory, with a discount which Edison Accumulators Ltd. will fix from time to time.
- 3: Edison Accumulators Ltd. agrees to relinquish from its exclusive territory Sweden and Norway, but will retain a non-exclusive right to sell Edison Storage Batteries in Norway and Sweden and in return Thos. A. Edison and Edison Storage Battery Co. agree not to grant exclusive rights in any other country ~~where~~ in Europe excepting those countries to which exclusive rights have already been granted. Furthermore, Edison Accumulators Ltd. will have the right to export from Great Britain to such non-exclusive licensed countries and to sell to British Manufacturers for export to said countries.
- 4: Thos. A. Edison and the Edison Storage Battery Co. agree to grant to Edison Accumulators Ltd. the exclusive right to manufacture Edison Storage Battery parts as follows in Great Britain:
 - (a) All trays.
 - (b) Cell steel containers complete.
 - (c) All insulating parts.
 - (d) Accessories, such as poles, nuts, connectors, terminals, jumpers, electric filling outfits, electrolyte.
- 5: Edison Storage Battery Co. agrees to furnish to Edison Accumulators Ltd. detailed and assembly drawings of said detailed parts, together with all necessary information for the manufacture of such parts in Great Britain, and any special dies or tools necessary therefor, at cost, plus ten percent, of said dies and tools.
- 6: Edison Storage Battery Co. also agrees to instruct such representative as Edison Accumulators may appoint, in the proper manufacture of said detail parts, in the work of the Edison Storage Battery Co.
- 7: Until such reasonable time as Edison Accumulators Ltd. is ready to manufacture the said detail parts, Edison Storage

[ATTACHMENT]

2

Battery Co. will supply same, for assembly in Great Britain, at fair prices to be agreed upon .

8: When Edison Accumulators Ltd. is prepared and equipped to manufacture all the parts 'etc. referred to in Paragraph 4, the Edison Storage Battery Co. will supply Edison Accumulators Ltd. with unformed positive and negative plates of all standard types of Edison Cells, the prices to Edison Accumulators Ltd. to be agreed upon in conference of August 18th/19 and the future prices to be governed by proportionate increase or decrease in the corresponding types of cells' list prices.

9: In the event that conditions arise whereby it becomes necessary to manufacture the entire battery in Great Britain, Thos. A. Edison and Edison Storage Battery Co. agree to give Edison Accumulators Ltd. the first preference for such manufacture.

10: If the British Admiralty stipulates that such submarine batteries as they may wish to purchase be made in part or wholly in Great Britain, and if the Edison Storage Battery Co. desire to sell submarine type batteries to the Admiralty, the submarine type of battery will be included in the exclusive arrangement with Edison Accumulators Ltd.

Mr. Thomas A. Edison;

From - O. E. Sholes, V.P. & Gen. Mgr.,

To - All Members of the Board of Directors

Subject: Sales Guarantees.

August 22th, 1919.
Duck #1
2-6056

Sholes

At the direction of the Board we enclose copy of proposed new form of Guaranty, as recommended by Sales Committee and approved by the Legal Department;

In the first blank space in second paragraph reading "delivering at least _____ % of their rated capacity, etc." we propose to insert as each case may be -

80% for Mine Locomotive Service;

80% for service more severe than normal such as Commercial Truck in a hilly city or Industrial Trucks and Tractors under severe grade conditions;

90% for all other services, or some other figure less than 100% determined by some special case.

In second blank space in second paragraph reading "---- their rated capacity of _____ ampere hours", we propose to insert rated capacity as given in all our literature of the particular type cell covered by this guaranty.

In third blank space in second paragraph reading "---- we will replace them with other cells having _____ % of rated capacity, etc.", we propose to insert 100% in all cases, but omit it from the printing in order to keep our competitors guessing.

Respectfully submitted,

O. E. Sholes,

Vice Pres. & Gen. Manager.

Enclosure -

Sholes - Please send me the old form showing what we did guarantee & the proposed new guarantee to see the change 703

[ENCLOSURE]

EDISON STORAGE BATTERY SERVICE GUARANTY

Date

Name

Address

Nov

As an assurance to you that the quality of durability possessed by the Edison Storage Battery shall inure to your benefit, we, the undersigned EDISON STORAGE BATTERY COMPANY, hereby guarantee all the Type cells bearing serial numbers as per the list herewith as follows:

1. We guarantee that any defect in workmanship or material which may develop within a period of one year from the date of shipment of said cells by us will be corrected free of charge f.o.b. Orange, New Jersey.

2. We guarantee that, if at any time within a period of TEN YEARS from the date of said shipment, any of said cells shall, when tested under our supervision, be found incapable of delivering at least 90 per cent of their rated capacity of _____ per cent of rated capacity at a charge to you for each cell equal to the list price thereof at the date of replacement by us less an allowance, for the cell replaced and returned to us, equal to the percentage of its list price set opposite the period during which the benefit of this guaranty is claimed in the following schedule:

<u>Period During which Benefit of Guaranty is Claimed</u>	<u>Percentage of List Price Allowance</u>
First year	100 per cent
First 6 months of second year	75 " "
Second 6 " " "	65 " "
First 6 " " third "	55 " "
Second 6 " " "	50 " "
First 6 " " fourth "	45 " "
Second 6 " " "	40 " "
First 6 " " fifth "	35 " "
Second 6 " " "	30 " "
Sixth year	28 " "
Seventh year and last 6 months in 8th year	25 " "
Second 6 months in 8th year and 9th and 10th years	25 " "

We further guarantee that all cells furnished to replace other hereunder will likewise be covered by this guaranty, subject to all the conditions herein contained, their replacement allowance being based upon the date of their shipment by us to you in accordance with the foregoing schedule; provided however that this agreement and guaranty and our responsibility hereunder shall not extend beyond the expiration of ten years from the date of shipment by us of the original battery of cells covered hereby.

All cells to be replaced shall be delivered to us f.o.b. Orange, New Jersey. All cells supplied hereunder will be delivered by us f.o.b. Orange, New Jersey. All cells and parts thereof replaced by us hereunder shall become our property. We reserve the right to require payment of the

[ENCLOSURE]

aforsaid charge in cash before replacing any cells hereunder unless your credit with us is satisfactorily established at the time of such replacement.

New

If, at the time of any replacement hereunder, we are required to pay any Federal, State, County, Municipal or other tax on account of such replacement, we shall have the right to add the amount of such tax to the charge made you for such replacement.

This guaranty and agreement is subject to the following conditions and is not binding upon us unless these conditions be faithfully observed:

- A. That all said cells be installed in a manner approved by us.
- B. That all said cells be used only in connection with apparatus approved by us and maintained in reasonably good repair.
- C. That all said cells be cared for and operated in accordance with our standard printed instructions.
- D. That our authorized inspectors and Agents have access to said cells for test and inspection at all reasonable times.
- E. That all of said cells be used only for the purpose for which same are furnished to you, and used only within the limits of the United States, which for this purpose shall be considered not to include its insular possessions, Alaska, or the Panama Canal Zone.

This guaranty and agreement applies only to the above cells sold to you and is not assignable or transferable. Furthermore, this guaranty and agreement shall not be binding upon us with respect to any cell lost or destroyed, or with respect to any cell damaged or injured through or by misuse, abuse, fire, wreck, collision, accident or other cause foreign to the service for which it is intended.

This guaranty and agreement is subject to the conditions that we shall not be liable for any delay in replacing any cells hereunder due to any strike, fire, flood, war or any unavoidable cause, or due to inability to obtain or delay in obtaining material; nor for any other delay unless caused by our failure to use reasonable diligence in supplying cells for such replacements.

Orange, N.J.

EDISON STORAGE BATTERY COMPANY

Accepted

By _____
General Sales Manager

By _____

Date _____

The following is a list of the serial numbers covered by this guaranty:

[ENCLOSURE]

Edison Storage Battery Company

Battery Guaranty



GUARANTY NO. _____
SALES ORDER NO. _____
NUMBER OF CELLS _____ TYPE _____
DATE OF ORIGINAL SHIPMENT _____ 19__

To _____



As an assurance to you that the quality of durability possessed by the Edison Storage Battery shall insure to your benefit, we, the undersigned, EDISON STORAGE BATTERY COMPANY, hereby guarantee all the Type _____ cells bearing serial numbers as per the list hereon as follows:

1. Any defect in workmanship or material which may develop within a period of one year from the date of shipment of said cells by us will be corrected free of charge, at _____, N. Y. b. Orange, New Jersey.

2. If at any time within a period of _____ YEARS from the date of said shipment, any of said cells shall, when tested under our supervision, be found incapable of delivering at least _____ ampere-hours, we will replace them with others having full rated capacity at a charge to you for each cell equal to the list price thereof at the date of execution by us of this guaranty less an allowance of _____ per cent. If a cell replaced and returned to us, equal to the percentage of its list price set against the period during which the benefit of this guaranty is claimed in the following schedule:

Period during which benefit of guaranty is claimed	Percentage of list price allowance
First year.....	100 per cent.
First three months of second year.....	75 per cent.
Second three months of second year.....	73 per cent.
Third three months of second year.....	70 per cent.
Fourth three months of second year.....	67 per cent.
First three months of third year.....	64 per cent.
Second three months of third year.....	61 per cent.
Third three months of third year.....	58 per cent.
Fourth three months of third year.....	55 per cent.
First three months of fourth year.....	52 per cent.
Second three months of fourth year.....	49 per cent.
Third three months of fourth year.....	46 per cent.
Fourth three months of fourth year.....	43 per cent.
First six months of fifth year.....	40 per cent.
Second six months of fifth year.....	37 1/2 per cent.
First six months of sixth year.....	35 per cent.
Second six months of sixth year.....	32 1/2 per cent.
Seventh to tenth years inclusive.....	30 per cent.

[ENCLOSURE]

All cells furnished to replace others hereunder will likewise be covered by this guaranty, subject to all the conditions herein contained, their replacement allowance being based upon the date of their shipment by us to you in accordance with the foregoing schedule; provided however that this agreement and guaranty and our responsibility hereunder shall not extend beyond the expiration of ten years from the date of shipment by us of the original battery of cells covered hereby.

All cells to be replaced shall be delivered to us f. o. b. Orange, New Jersey. All cells supplied hereunder will be delivered by us f. o. b. Orange, New Jersey. All cells and parts thereof replaced by us hereunder shall become our property. We reserve the right to require payment of the aforesaid charge in cash before replacing any cells hereunder unless your credit with us is satisfactorily established at the time of such replacement.

This guaranty and agreement is subject to the following conditions and is not binding upon us unless these conditions be faithfully observed:

- A. That all said cells be installed in a manner approved by us.
- B. That all said cells be used only in connection with apparatus approved by us and maintained in reasonably good repair.
- C. That all said cells be cared for and operated in accordance with our standard printed instructions.
- D. That our authorized inspectors and agents have access to said cells for test and inspection at any reasonable time.
- E. That all of said cells be used only for the purposes for which same are furnished to you, and used only within the limits of the United States, which for this purpose shall be considered not to include its insular possessions, Alaska or the Panama Canal Zone.

This guaranty and agreement applies only to the above cells sold to you and is not assignable or transferable. Furthermore, this guaranty and agreement shall not be binding upon us with respect to any cell lost or destroyed, or with respect to any cell damaged or injured through or by misuse, abuse, fire, wreck, collision, accident or other cause foreign to the service for which it is intended.

This guaranty and agreement is subject to the condition that we shall not be liable for any delay in replacing any cells hereunder due to any strike, fire, flood, war or any unavoidable cause, or due to inability to obtain or delay in obtaining material; nor for any other delay unless caused by our failure to use reasonable diligence in supplying cells for such replacements.

Orange, New Jersey

EDISON STORAGE BATTERY COMPANY

Date:

By _____
Vice President

Accepted:

By _____
Date _____

[ENCLOSURE]

Data relating to vehicle in which the battery hereby guaranteed is to be exclusively used:

Name of Manufacturer _____

Type of Vehicle _____

Manufacturer's Vehicle No. _____

LIST OF BATTERY CELL NUMBERS

[ENCLOSURE]

Edison
Storage Battery
Guaranty

106
115

THOMAS A. EDISON LABORATORY.

September 15, 1919.

Mr. W. H. Mendowcroft.

On July 2nd, you advised me that the 15 A-6 Cells which were delivered in October, 1918, to the Brooklyn Navy Yard for the use of Mr. Thomas A. Edison on Motor Sailor Boat No. 1206 were still on the boat. If these Cells are still in use, will you please so advise me.

A memorandum from you in this connection will be appreciated.

G. M. Rydger

LABORATORY OFFICE MANAGER.

GMR:AJU.

Mr. Rydger:
These cells will be removed
from the boat within a few days
and returned to the Battery Co.
W. H. Mendowcroft

9/16/19

10/8. Shipped boat
per W. H. Mendowcroft

EDISON STORAGE BATTERY COMPANY

Memorandum

Sept. 20, 1919.

Meadcraft

*Write note of
thanks & say I am*

TO- Mr. Thomas A. Edison, president.

FROM- Mr. C.E. Sholes, V.P. & G.M.

*pride of the
check & hope the boys
will get many of these*

The employees of this Company have asked

that Check No. 1 of our first thrift Dividend shall be
sent to you, and we enclose accordingly.

Edison

At the same time, may we express our thanks
for the generous approval you gave to the experiment with
this plan, and our confident hope to justify it.

Faithfully,

C. E. Sholes

C. E. Sholes
Vice Pres't & Gen'l Mgr

7865

*Mr. Kellow
Mr. Edison has written a
letter of acknowledgment
of my letter of 7/25/19*

[ENCLOSURE]

CONFIDENTIAL

EDISON STORAGE BATTERY COMPANY
Office of the General Manager.

SB-109-27C-10

THRIFT DIVIDEND NOTICE

The Board of Directors has kindly consented that commencing with September 1st, and for a period of 6 months thereafter, we may try out a plan by which all employees of the Edison Storage Battery Company, Edison Storage Battery Supply Company, Edison Chemical Works, and Edison Storage Battery Garage Co., can earn some extra payment each month. The plan is conceived in fairness and friendship to see if the principle can endure, and is as follows:

WHEREAS it has always been necessary, and is now necessary to put all money received for sales back into the business, and

WHEREAS it is believed that under the new organization the Sales will be materially increased and enable a larger production which means lesser costs, and

WHEREAS it is believed that the Manufacturing Division and Chemical Works and all other Departments can also accomplish material savings and betterments under new organization and a Dividend Plan, and

IT HAS BEEN AGREED that commencing with September 1, 1919, and continuing until February 28th, 1920, but without implying, inferring or incurring any obligation beyond such period.

1. That a fair estimate of the probable cost (including all reasonable charges, but without any profit) of cells manufactured from September 1st, 1919 to February 28th, 1920, and calculated into A-4 equivalents, is \$11. per cell, and
2. If and whenever during the period specified, the cost of A-4 equivalents is reduced from \$11., then one-half of the sum of the reduction shall be divided equally among all employees excepting
3. From the whole sum of any cost reduction attained, there shall first be deducted the cost and losses of any defective products thrown out by Inspectors, or rejected and returned by the Test Department or District Managers or customers, as well as the cost and loss of any unnecessary waste, etc., etc., which has not previously or otherwise been calculated into costs, and
4. On or before the 8th day of September, and during each succeeding month of the whole period specified herein, the Managers Committee shall furnish the Board of Directors with an estimate and reasonable justification thereof of the savings (if any) which have and or will probably be accomplished during the previous and succeeding month, and which estimate as approved or changed by the Board of Directors and corrected by deductions as mentioned in preceding paragraph shall become the basis of division and payment (if any) but
5. On or before the 15th of each month or at any earlier date when the Accounting Committee shall report the actual cost of Edison A-4 equivalents for any previous month of the whole period specified herein, then a correction of the estimate as planned in paragraph 4 hereof shall be made as provided in paragraph 3 hereof, and the correction shall be added to or deducted from the next succeeding payment.
6. It shall be understood that any employee who is discharged or shall leave the employ of the company for any reason whatsoever shall lose all right to share in any dividend subsequently paid, and
7. It shall be particularly understood and agreed that all obligation of the Company shall end with the payment of dividends (if any) earned and calculated to February 28th, 1920, and that the Board of Directors may thereafter discontinue interest or change or renew the agreement as they may then prefer and decide.

What we think or say about this plan does not matter. It is how we stand the test and what we do with the opportunity, that is vital. Everyone must do his or her share to prove that this partnership is profitable in money and happiness. It means diligence, fairness, faithfulness, fellowship and frugality on the part of every one of us. It means that carelessness, idleness and wastefulness will reduce the Dividend for everyone.

If you are strong and skilled, then do your part, and some for the fellow who is not so fortunate and who envies you. If you are not strong or skilled maybe you can help with suggestions.

Do your part. I will do mine.

C. E. SHOLES, ✓
General Manager.

September 2nd, 1919.

[ENCLOSURE]

THRIFT DIVIDEND NO.1.

To prevent misunderstanding you are again reminded that these payments are based on estimated savings, and that we cannot know the actual savings of any month until the 15th of the next month.

Also, this plan is an experiment and it is up to us to show the Directors that this kind of partnership pays.

Let's try to make the actual savings more than the estimated savings and thus earn increased dividends.

Every one must do his or her share with diligence, fairness, faithfulness and frugality.

Anyone and every one who is tardy, careless, idle, or wasteful is reducing the dividend for all others and is therefore unfair.

Do your part. I will do mine.

C. E. SHOLES,

Sept. 15th, 1919

General Manager.

60215

September 25-1919

From Walter Stevens, Manager, Export Division,
To Arthur Mudd, Secretary, Edison Storage Battery Company.

Subject: Edison Accumulators Limited's Agreement.

Under date of August 22d, 1919, Mr. Sholes handed to Mr. Monnet, formal Notices (2) of the termination and cancellation of our Agreements with Edison Accumulators Limited, said termination and cancellation to take effect 90 days from August 22d, 1919.

On August 28th I handed to Mr. Maurice E. Fox who was about to return to London, two further sets of Notices, with instructions to present same to the Secretary of Edison Accumulators Limited in the presence of a witness, sending me a letter properly signed by himself and witness to the effect that said Notices had been delivered to the Secretary of Edison Accumulators Limited.

I hand you herewith, original of Mr. Fox's letter, witnessed by H. R. Hughes, in which he advises that on September 10th, 1919, he presented to the Secretary of the above company at their registered offices, 2/3 Duke Street, London S. W. 1, these Notices.

Will you please attach Mr. Fox's original letter to copy of original Agreement which you are holding at your office.

In order that our files may be complete, kindly send me an acknowledgment of the receipt of Mr. Fox's letter.

WALTER STEVENS.

ES.

C. O. to
Charles Edison,
C. E. Sholes,
Delco Holden,
H. Lanchan.

[ENCLOSURE]

COPY

154 Wardour Street,

London W. 1.

September 10-1919.

Walter Stevens, Esq.,
Vice President & Manager Export Division,
Edison Storage Battery Company,
10 Fifth Avenue,
New York City, U. S. A.

Dear Sir:--

We, the undersigned, beg to inform you that we have this day presented to the Secretary of Messrs. Edison Accumulators Limited, at the registered offices of the said firm, 2-3 Duke Street, London, S. W., your two notifications dated August 22d, 1919, wherein the said firm is informed that the exclusive and non-exclusive rights granted by Agreement dated September 20th, 1918, are to be cancelled at the expiration of ninety (90) days from the date of said notifications.

Yours faithfully,

(Signed) Maurice E. Fox,
(Signed) H. R. Hughes.

Registered.

Planned
Mr. Miller's
Secretary 245 Ave. 9, N.Y.C.,
John Willigrove message
to Mr. Hamilton W. Miller
out of town. Hall

J. V. Miller

take

Please ~~send~~ 3 lbs of

Nickel hydroxide just
as you send it to factory
but screened them 50 mesh
& put it in one of your
Iron pots & Reduce
by Hydrogen
& send it up to

Lab

*Walker -
Sam'l C. Esposito
Cm*

D
1919 Battery, Storage
September 26-1919

RC
FROM EDISON STORAGE BATTERY COMPANY

EXPORT DIVISION

Mr. Charles Edison:-

After considerable correspondence we have entered into an exclusive sales arrangement with the Mine Safety Appliances Company, Pittsburg, Pa., whereby we have granted them the exclusive sale of our Mine Lamps in China, Japan and Canada for a period of one year from October 1st, 1919.

We have agreed to allow them the same discounts as they enjoy from the Parent Company, and to forward all orders and inquiries received from that territory, to them, during the period of the Agreement.

I have advised Messrs. Sholes and Kelly in reference thereto.

WS.
O. G. to
O. S. A. Williams
Chas. Foyer.

WLS
WALTER STEVENS.

B541

October 1, 1919

Walker Vehicle Co.
Chicago, Illinois.

Gentlemen:

For your reference we confirm contingent agreement as follows:

1. The Walker Company will recommend Edison batteries for use in any and all vehicles manufactured and assembled by the Walker Company, and will further agree to give preferred publicity to the Edison battery in its catalogs and sales books.
2. In consideration of as mentioned next above, and that the Walker Company agrees to purchase not less than 5000 A4 equivalents from October 1st, 1919 to February 28th, 1920, the Edison Company shall extend and pay to the Walker Company a special allowance of 5% for advertising, and which sum shall be taken from the Advertising appropriation of the Edison Company, but this allowance of 5% shall not apply against any batteries purchased prior to date hereof by the Walker Company, or against any list of prices lower than the now existing price list of the Edison Company.
3. It is mutually agreed that the special allowance of 5%, as mentioned in paragraph next above, shall be calculated on the sum of net invoice (after all other discounts excepting cash discount are deducted therefrom) and shall be paid or credited, as the Walker Company may prefer, on or before the fifteenth of each month for all invoices of the previous calendar month.

Also it is mutually agreed that this agreement shall be kept in confidence between us.

Respectfully yours,

C. E. Sholes.
Vice President & Gen'l Mgr.

COPY

My S.B. Mamber



EDISON STORAGE BATTERY COMPANY

Memorandum

October 8, 1919

TO: Mr. Thomas A. Edison, Pres't,
FROM: Mr. C.E. Sholes, Vice Pres't & Gen'l Manager
SUBJECT: Experimental Work.

Dear Mr. Edison -

Can you kindly help us with your advice in premises as follows:

(1). This Company is indebted for an important sum and although we have high hopes to overcome this burden of indebtedness, it seems unreasonable to expect much progress until we have first learned to live within our means, and

(2). In order to prevent any unwise or unnecessary expenditure, the Managers of the various divisions have agreed that no experimental work shall be undertaken except as authorized by the Managers' Committee and by a shop order approved by the General Manager.

(3). One of our most beloved associates has unknowingly broken this rule and because of the circumstances we are at loss to know what to do about it.

(4). At the present time, we are operating 18 cranes for nine hours per day and handling about 67,500 gallons of wash water and solution. When this solution is precipitated, we obtain a total of about 20,000 pounds of nickel-copper carbonate per day. We are not at present losing any appreciable quantity of solution, and of the total carbonate produced we are refining and obtaining as nickel solution or copper compounds the equivalent of 15,000 pounds of carbonate, leaving an unused daily balance of 5,000 pounds of nickel-copper carbonate, which is being stored for future recovery.

(5). We have contracted for and have at present 80% completed, and will have in operation in ten days, equipment sufficient to handle all wash water and solution, complete precipitation and production of carbonate, and recovery of nickel and copper from carbonate.

(6). Any additional equipment for recovering or refining this carbonate seems unnecessary and uneconomical and since the greatest part of the work is the recovery of the carbonate from the solution, it also seems logical to centralize the work at Orange. Any excess of Nickel Sulphate solution which may be produced could be shipped to Silver Lake in drums for direct use, or, we can if necessary, evaporate (we have the pans) and send the Sulphate in the form of crystals.

(7). The beloved Associate who has violated our rule is Mr. Thomas A. Edison and the question at issue is therefore whether we shall censure the President or fire the General Manager.

(8). As a compromise, and inasmuch as it is not fair to criticize without offering a remedy, we presume to suggest that Mr. Doherty visit us and look over our plant and give us the benefit of your plans in connection with the equipment now installed and planned.

(9). Asking the favor of your kind reply, I am,
Faithfully yours,

C. E. Sholes

copy
Charles V. u attend to this
but I would like to see my
agreement I have signed in
this connection
October 21st, 1919

Edison

PERSONAL

Mr. C. E. Sholes, V.P. & G.M.
Edison Storage Battery Company
Orange, New Jersey

SUBJECT: Tidewater Equipment Company - Starter.

Dear Mr. Sholes:

The last time I talked to you about the above subject you stated that you were determined not to finish the model at the Edison Laboratories nor to proceed with putting it on the car and trying it out, and I desire to give you a little history in connection with this whole transaction and have your final decision on the above question.

When this proposition was brought before Mr. Thomas A. Edison he investigated it very thoroughly and placed his O.K. on the starter and on the fact that it could be made to work in fine shape with an Edison battery, bought fifteen shares of the stock for \$1000.00 cash and the Edison Storage Battery Company made an agreement to make the model and demonstrate this model for a sum of not to exceed \$5,000.00, this to be done at Orange at the Laboratories.

Owing to this O.K. of Mr. Edison and the agreement and the further fact that it was held by all concerned that if a starter could be put on the market with an Edison battery, it would be a wonderful success, and at a meeting of the sales organization, at which the Vice-President of the Edison Storage Battery Company presided, the proposition was placed before employees of the Battery Company that they should join in buying some of this stock.

Included in that number was Mr. Wm. G. Bee, deceased, formerly Vice-President of the Edison Storage Battery Company, who also had great confidence in the starter, owing to Mr. Edison's O.K., and his widow, carrying out his wishes, placed \$500.00 in cash in the stock of this company. Other employees took stock, among them myself, taking \$900.00 worth of the stock.

A large number of citizens of Boston and some of Portland, Me. put in between twenty and thirty thousand dollars in cash into

Mr. C. E. Sholee.

10/21/19.

the stock of this company, entirely on the strength of Mr. Edison's O.K. and agreement; and Mr. Robert W. Sanford, 58 State Street, Boston, one of the directors of the Tidewater Equipment Company, states that he and the rest of the New England stockholders are very much grieved and hurt at the failure of the Edison Storage Battery Company to carry out what they had agreed to do.

Under the original agreement, two models were made and, of course, as is the case in all such inventions, the second one worked much better than the first one and was almost perfect, running as it did in a Ford car belonging to the Edison Company for nearly four months.

It was then suggested that the engineer who had designed the models under the patents could make great improvements, eliminating many parts and make possible economical manufacture, and this question was taken up very carefully by Mr. Thompson and myself with Mr. Chas. Edison, who authorized an arrangement to be made with Mr. Hanson of Portland, Me., the said engineer, to proceed with drafts, etc., and to supervise the finally putting together of the product of the said drafts at a sum not to exceed cost and \$700.00.

On the strength of this agreement on the part of Mr. Chas. Edison I went to Portland, Me., called a meeting of the Board of Directors and in order to protect the company, the Board elected me as one of their number; and further, on the strength of Mr. Chas. Edison's word that the model should be completed and tried out thoroughly, I individually and alone put my hand in my pocket and paid up all of the outstanding debts of the Tidewater Equipment Company, amounting to several hundreds of dollars, taking stock therefor.

I wanted you to know all the above facts and have been asked by the directors and stockholders of the Tidewater Equipment Company to know if your repudiation of Mr. Chas. Edison's agreement is to be final, and I would consider it a great personal favor if you would carefully go over the matter and give me the decision of yourself and associates.

I am sending a carbon copy of this letter to Mr. Thomas A. Edison and to Mr. Chas. Edison, in order that they may know fully the feeling of the numerous stockholders in this matter. If for the sake of a few hundred dollars you are going to throw aside all agreements and possibilities of this being a wonderful chance to make a very large market for Edison storage batteries, the Tidewater Equipment Company would like to know it, in order that they may know how to proceed.

With assurances of my personal regards, I remain,

Very truly yours,

Edw. Drake Smith

[illegible]

h
lly invited

ally invited to attend a farewell dinner
by his co-workers.
He departed promptly at 8 o'clock Thursday
for Stetter's, Newark, N. J.

ally invited to attend a farewell dinner

served promptly at 8 o'clock Thursday

ARRANGEMENT COMMITTEE,
H. J. Staudk.
Chairman.

Mr Edison
Olsen is in the
Engineering Dept - He is
the Swede whom you will
probably remember.
Meacham

73 He told me he was leaving to go into biz for himself

The Edison Storage Battery Supply Co.

THOMAS A. EDISON
 PRESIDENT
 H. C. JARVIS
 SECRETARY
 H. F. MILLER
 TREASURER
 ARTHUR MUDG
 SECRETARY

TRADE MARK
 Thomas A. Edison

ORANGE, N.J.U.S.A.

CHARLES EDISON
 DIRECTOR

CHARLES EDISON
 DIRECTOR

IN REPLYING
 ADDRESS THE COMPANY
 AND REFER TO

Nov. 3, 1919..

ANNUAL MEETING

Notice is hereby given that the annual meeting of the stockholders of The Edison Storage Battery Supply Company will be held at the principal office of the Company, corner Valley Road and Lakeside Avenue, West Orange, N. J., on Wednesday, Nov. 12, 1919, at ten o'clock a. m. for the following purposes.

- (1) to elect five directors; (2) to take appropriate action upon annual reports to be submitted by the Treasurer and other officers of the Corporation; and (3) to transact all such other business as may regularly come before the meeting.

If you do not expect to be present, will you kindly send me a suitable proxy, designating an agent to represent you at the meeting. A form considered suitable for this purpose is enclosed, which, if satisfactory to you, should be dated, signed and witnessed.

Yours very truly,

Arthur Muddy
 Secretary.

*Madecraft -
 I will sign proxy
 down at Lab
 have no
 pen at home
 S*

TO: Thomas A. Edison Laboratory,
Mr. Meadowcroft.

MEMORANDUM NO. 1237

DATE: Nov. 13th 1919.

SUBJECT: Orders for Mr. Edison.

Dear Mr. Meadowcroft,

There has been some confusion as to the authority of ordering material from us on the strength of "Mr. Edison wants same immediately". At the meeting of the Manufacturing Committee today the matter was brought up and I made the following decision.

That any orders bonafide from Mr. Edison for material should be put through without any formal order or requisition and sent to Mr. Edison at the earliest possible time in which we can get out the material, not sacrificing quality, however.

That no orders should be accepted by telephone or otherwise to do work on the supposition that it is for Mr. Edison, unless the said order comes through you.

Will you therefore, hereafter, forward to us any orders for material for Mr. Edison or accept and approve of any orders or requisitions telephoned or sent to us by other parties said to be ordering for Mr. Edison.

Unless we hear from you to the contrary, this will be the ruling we shall make.

J. H. Miller,
Division Manager.

COPIES TO: Mr. Hunter and Mr. Burrows.

OK WJ

Mr. Edison

This is a very good rule, and if anyone comes to me and wants me to order anything for you, I shall require them to show me your name or initials.

Meadowcroft

H. G. THOMPSON
PRESIDENT

F. V. MCGINNISSE
VICE-PRESIDENT

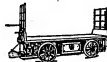
HAROLD H. SMITH
SECRETARY

Transportation Engineering Corporation

MAIN OFFICE: 200 FIFTH AVENUE, NEW YORK
DISTRICT OFFICE: 1305 MANHATTAN BUILDING, CHICAGO



RAILWAY DISTRIBUTORS
FOR
EDISON STORAGE BATTERY COMPANY
EDISON BATTERIES FOR
TRAIN LIGHTING
RAILWAY SIGNALING AND
OTHER RAILWAY PURPOSES



RAILWAY DISTRIBUTORS
FOR
THE AUTOMATIC TRANSPORTATION COMPANY
INDUSTRIAL TRUCKS
TRACTORS AND
ENGINES

New York, Nov. 25, 1919.

Mr. Charles Edison,
Orange, N. J.

Dear Charles:-

The following information has come to our attention and I request that you review this letter for to my mind it is bound to re-act in a manner detrimental to the interests of the Edison Storage Battery Co., and at the same time is an action which places us in a most embarrassing position and we cannot help but believe that it is aimed to make it more or less impossible for us to handle the Edison Battery for you with any profit whatsoever to ourselves.

The action on your part of offering these discounts to the railroads in the light of their being preferred customers, we cannot help but feel is detrimental, as for instance, certain large users of Edison batteries in commercial street truck use or in industrial truck use or even in mine locomotive service, are as fully entitled to the same discounts from your list, as are the railroads.

If these discounts be universal to large users irrespective of the service to which they might be applied, there may not be the same criticism but to single out the railroads, many of whom even though under contract, are but purchasers in very small quantity, is in my opinion bad business.

If the maximum discount of 20% as contemplated, is given the railroads upon their signing up for the exclusive use of Edison batteries for all of its application for its service, this will immediately incur the displeasure of the industrial truck manufacturers, who are selling to railroads and re-act against you in a very serious manner. The industrial truck manufacturers will become incensed at your offering this maximum discount to the user when their's is only 5% above this and when it cost them 10% to handle the business with their customers who are anywhere from 60 to 90 days in paying for the goods, whereas on the other hand you receive your payments from some of the manufacturers in 30 days and some of them even discount their bills.

Furthermore, this action on your part in announcing these greater discounts to railroads will immediately become known to your competitors, the lead battery manufacturers, and will be a much easier matter for them to figure against you in price than it has been ever heretofore.

This leaves nothing to your salesman to hold up his sleeve in order

to close at the last moment and a circular letter of this nature will not aid you with some of the larger railroads when they learn that any and all railroads, regardless of quantity purchased, can obtain this maximum discount under contract.

Also under our arrangement with you, we do not enjoy any commission where you have made contracts and should you be successful after the roads are returned to private ownership of getting more roads than you now have, tied up with contracts on this basis, it would eliminate us altogether.

We understand that this announcement has been sent to all of the Edison Storage Battery salesmen and yet we have not received a copy and would therefore blindly go ahead and quote what we understood at the Edison Company's policy in the way of prices only to be made a laughing stock of at the very outset.

In the spirit of fair play and honesty will you not have this matter reviewed and give us the opportunity of presenting what we consider to be the fundamental facts in the case before this is allowed to become operative.

Hardon the seeming conceit, but for ten years practically, I with the assistance of Mr. McGinness, have been endeavoring to get the railroad business of the country and have been successful as you well know, in tying up the largest users either with contracts or without it, and it is safe to say that a great many roads to whom this proposition will be presented who would not under any circumstances tie up in an exclusive contract, will however demand the maximum discount in view of the fact that they are as large purchasers of storage batteries as are those roads or will be those roads who are now under contract or who might enter into contract.

Also immediately that this announcement is made known to certain Acle Generator manufacturers who have not a battery of their own and whom we have now gotten to the point where they are working with us and for you in the attempt to have Edison batteries used wherever possible, with their equipment it will simply antagonize them and if I am not greatly mistaken, they will turn from Edison to lead because there will be nothing in it for them whatsoever in attempting to secure Edison battery business when the railroads with whom they are dealing can purchase them as cheaply as they can and under these circumstances they will take the easier course and permit the road either to buy whatever they please or as I have stated before, take the initiative and attempt to sell their equipment with lead batteries.

The lead people in their wildest dreams would protect the manufacturer and the railroad business of the country has always been conducted in all lines on the basis of the manner in which I directed it while with your organization.

Please believe me that this matter is far reaching and will only injure you in the long run, and if you will pardon me, this decision can only have been arrived at due to ignorance of the manner in which the railway

supply business is conducted and when you come to realize it, the railroads collectively are the ~~best~~ purchasing power in the United States as a class.

To sum this matter up, it has never been necessary to give these discounts in the past to obtain the railroad business.

Yours very truly,

H. J. Thompson
President.

H

[ENCLOSURE]

TO ALL PURCHASING AGENTS

Subject: New discounts.

Please be advised that on new orders received from and after December 1st, 1919, but subject to change without notice, we will extend the following uniform discounts to railroads.

First: On orders for Edison Storage Batteries for any purpose whatsoever, 10% from list price prevailing on date of acceptance for orders.

Second: On optional contract or agreement including schedules for specifications covering Edison Storage Batteries, 15% from list prices prevailing on date of acceptance of orders.

Third: On contracts engaging the exclusive purchase of Edison Storage Batteries for all battery applications, 20% from list price prevailing on date of acceptance of orders.

The favor of your acknowledgement with statement of your interest in any of these propositions will be very much appreciated.

Yours very truly,

John Kelly,
Gen. Sales Mgr.

By E. N. Cutting,
Mgr. Railroad Dept.

[ENCLOSURE]

COPY

cel

2 copy - 7

May 28, 1919

Sales arrangement with Mr. H. G. Thompson concerning Sales of Batteries to Railroads for Lighting, Switch, Signal, and certain miscellaneous services.

Mr. H. G. Thompson,

Orange, New Jersey.

My dear Mr. Thompson:-

Referring to our conversation concerning above and for record, we confirm that in view of your experience and service with this Company, we are willing that you should organize a Corporation, of which you control a majority of the stock and are the active manager, and undertake to sell our Batteries to Railroads in the United States, under terms, conditions and exceptions as follows, viz:

The arrangement shall be informal and based on mutual confidence, in the same manner as our arrangement with the Mine Safety Appliance Company, which may be terminated at any time, but which has been very satisfactory, and with which you are entirely familiar.

At least until you have shown it to be of advantage to us to relinquish the right, we do not give up our right to sell direct and quote such discounts as may be deemed necessary. We will, however, undertake to keep you informed as to quotations made, you in turn to keep us informed. Furthermore, we intend to extend all reasonable helps towards enabling you to satisfactorily attend to this business for us.

All sales of Batteries shall be made in our name and for our account and subject to acceptance and confirmation by us, and you will not directly or indirectly sell or offer for sale any other Storage Batteries.

Discounts shall be subject to change on sixty days written notice to you, but for the present and until further advised we will allow you as a basis for the calculation of your commissions:

[ENCLOSURE]

-2-

On A & B type cells	- 25% from List Prices
On other " " "	- 20% " " "
On Solution & Fillers	- 10% " " "
On Miscellaneous Parts	- Discounts corresponding to cell types

Settlements may be made after the end of each month by remitting to you the sum of differences between discounts to you and those extended to your customers, in all cases in which the discount to your customer is less than the discount to you.

All Sales and Convention expenses shall be borne by you and we shall not be expected to assume any part thereof, but we shall, of course, assist you with our usual advertising, literature and inspection service.

The term "Railroads" as used herein includes Electric Street, Subway, and Interurban Railroads in the United States. The business of such placed through agencies (like Robinson, Cary & Sands) and the business placed through Equipment Manufacturers (like Safety Car Heating & Lighting Co.) and through Car Builders (such as the Pullman Co. and American Car & Foundry Co.) is in this arrangement considered included. But, at least for the present, this arrangement does not include business of Steamship Lines owned or operated by Railroads, or business of Railroads operating wholly without the United States, or Export business, or Mine Locomotive business, or Industrial Truck business, or business of the Railway Storage Battery Car Co., or other business of such general nature with Railroads, or batteries for the propulsion of storage battery propelled passenger cars. The term "United States" as used herein shall not include Alaska, the Canal Zone, or any insular dependencies or possessions.

Also, and to prevent unnecessary misunderstanding, we remind you that the Company has already paid the expense of getting existing contracts and cannot fairly assume any additional costs for orders thereon. But we will supply you with a list of expirations so that you can prepare to renew these contracts.

It is understood that you will avoid undesirable competition with Edison Primary Battery in any of its established or prospective business.

It is understood and agreed that you, with your staff of assistants, either personally or through the corporation to be organized by you and to be under your direct active management, will diligently promote the sale of our batteries to railroads in the United States continuously so long as this arrangement remains in existence, and that you

[ENCLOSURE]

-3-

function shall be solely the solicitations of orders and such service as may be incidental thereto, and that neither you nor your corporation shall have any authority to make any contracts or incur any obligations in our name or on our behalf or binding upon us.

It is furthermore understood and agreed that we shall not be liable to you or your corporation for any commissions except on batteries actually sold under this arrangement and delivered and paid for, and that you shall not be entitled to any commissions on repair jobs or on replacements under guaranties.

It is further understood and agreed that the acceptance of any order procured by you is entirely a matter within our discretion, and that we shall not be liable to you or your corporation for commissions or otherwise because of any delay in delivery of batteries under any order, or for failure to deliver the same, or on account of the cancellation of any such order, or on account of any delay in making collections, or failure to make collections.

It is expressly understood and agreed that we shall have the right to terminate this arrangement at any time with or without cause on sixty days notice. Such notice may be given by the mailing of a registered letter, postage prepaid, addressed either to you or any officer of your corporation at your or its last known address.

It is further understood and agreed that in case of the termination of this arrangement in any manner, our obligation to pay you commissions shall not extend to any batteries supplied on orders received by us subsequent to the date of such termination, and in the case of orders received prior to the date of such termination, such obligation shall not extend to any batteries except such as shall have been ordered specifically for delivery prior to the expiration of four months after the date of such termination.

In conclusion we can only suggest that, as this arrangement is based on mutual confidence and good faith, we believe that you will agree that any matters which may develop and or which are not provided for herein may be safely left for future consideration, fair dealing and settlement.

Hoping that we have expressed as desired and with confidence that you will lend every possible assistance to a long and satisfactory continuance of this arrangement and to the success of every Edison interest, and with kindest regards and best wishes for your future, I am

Faithfully,

Accepted:
H. G. Thompson

Charles Edison
Chairman of the Board

[ATTACHMENT]

Day to Thompson,

200 Fifth Avenue,

New York, November 29th, 1919.

that I have not followed the
by at all for a long time & have had to leave it
entirely to Charles Edison. I think he will

Dear Mr. Edison:-

act fairly all around — S

Six months have now elapsed since the formation of my corporation to act, in accordance with your wishes, as the railway distributor for the Storage Battery Company. It will interest you to hear that, in spite of the restrictions placed upon railroads by the Railroad Administration, we have secured orders for some 22,000 A-4 equivalents or a little over \$500,000. worth of batteries.

In my conversations with you and Charles when the arrangement for me to sell batteries was being made, it was your idea that my company should act as the Railway Department of the Battery Company.

Mr. Scholes, as I understand it, objected to this being granted at once, and as a compromise, our rather informal agreement was made to read:

"At least until you have shown it to be of advantage to us to relinquish the right, we do not give up our right to sell direct and quote such discounts as may be deemed necessary".

This expressed the idea that later we would be made your exclusive Railroad Department. To further this and the agreement further stated:

"...we intend to extend all reasonable help toward enabling you to satisfactorily attend to this business for us".

I am indeed sorry to have to say to you that the present

Mr. Charles Edison
Mr. Thompson
was here and
gave him this message
McGraw-Hill

Done for
Hester
purposes

working arrangements are not as pleasant as we think they could be made, and should be for the best interests of yourself and us.

Your salesmen are acting in competition with us which brings about an unsatisfactory feeling in the minds of railroad officials, which can only result in confusion making it difficult for either of us to secure as much business as we think should be possible.

We have tried for months to find a way of working with your Sales Department, but apparently we have been unsuccessful, for the climax of their hostile acts is the preparation of a letter to be sent to the Purchasing Agents of all Railroads offering discounts as follows:

10 percent on all orders for batteries for any purpose

15 percent under an optional agreement to purchase Edison batteries

20 percent under an exclusive agreement to buy Edison.

I have written Charles asking him to prevent the sending of this letter not alone because it would nullify your agreement with me but because in a number of ways it would re-act and injure you directly. A copy of my letter to Charles is enclosed for your information.

When you were shown the agreement made with me last May, your comment was that it was not fair to me. So it has worked out, though at the time I was willing to accept it because I knew I could count upon your good faith.

As the working out of the arrangement, however, is left to others, I am going to ask if you will not consider putting it in more definite form. With the personnel of your sales force being gradually changed in character by the replacement of the older men who leave, by young men with generally little or no battery experience, I feel that we are more than ever in a position to hold your railroad business for you.

I will call Monday morning to discuss this matter with you. If you would care to have me call on you before then, say at your home on Sunday, please send me word by telephone and I will come at once. My phone number

(3)

is Glen Ridge 170.

I hope you will agree with me that this is a really serious matter
to both of us.

Sincerely yours,

H. P. Thompson.

HPT H

Mr. Thos. A. Edison,
Orange, N.J.

[ENCLOSURE]

New York, Nov. 25, 1919.

Mr. Charles Edison,
Orange, N.J.

Dear Charles:-

The following information has come to our attention and I request that you review this letter for to my mind it is bound to re-act in a manner detrimental to the interests of the Edison Storage Battery Co., and at the same time is an action which places us in a most embarrassing position and we cannot help but believe that it is aimed to make it more or less impossible for us to handle the Edison Battery for you with any profit whatsoever to ourselves.

The action on your part of offering these discounts to the railroads in the light of their being preferred customers, we cannot help but feel is detrimental, as for instance, certain large users of Edison batteries in commercial streettruck use or in industrial truck use or even in mine locomotive service, are as fully entitled to the same discounts from your lists, as are the railroads.

If these discounts be universal to large users irrespective of the service to which they might be applied, there may not be the same criticisms but to single out the railroads, many of whom even though under contract, are but purchasers in very small quantity, is in my opinion bad business.

If the maximum discount of 20% as contemplated is given the railroads upon their signing up for the exclusive use of Edison batteries, for all of its application for its service this will immediately incur the displeasure of the industrial truck manufacturers, who are selling to railroads and re-act against you in a very serious manner. The industrial truck manufacturers will become incensed at your offering this maximum discount to the user when their's is only 5% above this and when it cost them 10% to handle the business with their customers who are anywhere from 60 to 90 days in paying for the goods, whereas on the other hand you receive your payments from some of the manufacturers in 30 days and some of them even discount their bills.

Furthermore, this action on your part in announcing these greater discounts to railroads will immediately become known to your competitors, the lead battery manufacturers, and will be a much easier matter for them to figure against you in price than it has ever been heretofore.

This leaves nothing to your salesman to hold up his sleeve in order to close at the last moment and a circular letter of this nature will not aid you with some of the larger railroads when they learn that any add all railroads, regardless of quantity purchased, can obtain this maximum discount under contract.

Also under our arrangement with you, we do not enjoy any commission where you have made contracts and should you be successful after the roads are returned to private ownership of getting more roads than you now have, tied up with contracts on this basis, it would eliminate us altogether.

We understand that this announcement has been sent to all of the Edison Storage Battery salesman and yet we have not received a copy and would therefore blindly go ahead and quote what we understood as the Edison Company's policy in this way of prices only to be made a laughing stock of at the very outset.

In the spirit of fair play and honesty will you not have this matter

[ENCLOSURE]

reviewed and give me the opportunity of presenting what we consider to be the fundamental facts in the case before this is allowed to become operative.

Pardon the seeming conceit, but for ten years practically, I with the assistance of Mr. McGinness have been endeavoring to get the railroad business of the country and have been successful as you well know, in tying up the largest users either with contracts or without it, and it is safe to say that a great many roads to whom this proposition will be presented who would not under any circumstances tie up an exclusive contract, will however demand the maximum discount in view of the fact that they are as large purchasers of storage batteries as are those roads or will be those roads who are now under contract or who might enter into contract.

Also immediately that this announcement is made known to certain Axle Generator manufacturers who have not a battery of their own and whom we have now gotten to the point where they are working with us and for you in the attempt to have Edison batteries used wherever possible, with their equipment it will simply antagonize them and if I am not greatly mistaken, they will turn from Edison lead because there will be nothing in it for them whatsoever in attempting to secure Edison battery business when the railroads with whom they are dealing can purchase them as cheaply as they can and under these circumstances they will take the easier course and permit the road either to buy whenever they please or as I have stated before, take the initiative and attempt to sell their equipment with lead batteries.

The lead people in their wildest dreams would protect the manufacturer and the railroad business of the country has always been conducted in all lines on the basis of the manner in which I directed it while with your organization.

Please believe me that this matter is far reaching and will only injure you in the long run, and if you will pardon me, this decision can only have been arrived at due to ignorance of the manner in which the railway supply business is conducted and when you come to realize it, the railroads collectively are the biggest purchasing power in the United States as a class.

To sum this matter up, it has never been necessary to give these discounts in the past to obtain the railroad business.

Yours very truly,

H. P. Ranganathan
President.

[ENCLOSURE]

COPY OF PROPOSED LETTER TO RAILROADS FROM THE SALES DEPT. OF THE
STORAGE BATTERY COMPANY.

TO ALL PURCHASING AGENTS:

Subject: New Discounts.

Please be advised that on new orders received from and after December
1st, 1919, but subject to change without notice, we will extend the following
uniform discounts to railroads.

- First, On orders for Edison Storage Batteries for any purpose
whatsoever, 10% from list price prevailing on date of
acceptance of orders.
- Second, On optional contract or agreement including schedules
for specifications covering Edison Storage Batteries,
15% from list prices prevailing on date of acceptance
of orders.
- Third, On contracts engaging the exclusive purchase of Edison
Storage Batteries for all battery applications, 20%
from list price prevailing on date of acceptance of orders.

The favor of your acknowledgement with statement of your interest
in any of these propositions will be very much appreciated.

Yours very truly,

JOHN KELLY
Gen. Sales Mgr.

By E. M. CUTTING
Mgr. Railroad Dept.

EDISON STORAGE BATTERY CO.

ORANGE, N. J.

EDISON CHEMICAL WORKS DIVISION

SILVER LAKE, N. J.

Mr. Thomas A. Edison,
Laboratory,
Orange, N. J.

My dear Mr. Edison:

I have investigated the question of the number of employees we have on hand and a comparison of the present number with former periods is given you in the following tabulation:

<u>WEEK ENDING</u>	<u>NUMBER EMPLOYEES</u>	<u>WEEKLY PRODUCTION IRON DEPT.</u>	<u>WEEKLY PRODUCTION NICKEL DEPT.</u>
August - 1904	73	1720 lbs. Iron Mix	1895 lbs. Nickel Mix.
Nov. 28, 1910	84	6160 " " "	5200 " " Hyd.
June 14, 1919	176	15000 " " "	18200 " " "
Nov. 22, 1919	181	18000 " " "	16540 " " "

Five months ago we did not have the Laboratory on our payroll, but this was transferred to us this Fall. The Laboratory force includes six men who are working on electrical tests and two men on loading tests, that we have never had before. This is due to the fact that we are making the original loading tests for iron and nickel, and the electrical tests on iron mix, which formerly was done in Orange.

Also due to the fact that the Plant has spread out considerably more, it is necessary for us to have more men in the storeroom, additional watchmen and more men in the yard service.

Also due to more buildings, pipes, etc. there is more in the Maintenance Department.

However, the comparative figures from 1910 to date shows a very decided decrease in men, compared with production.

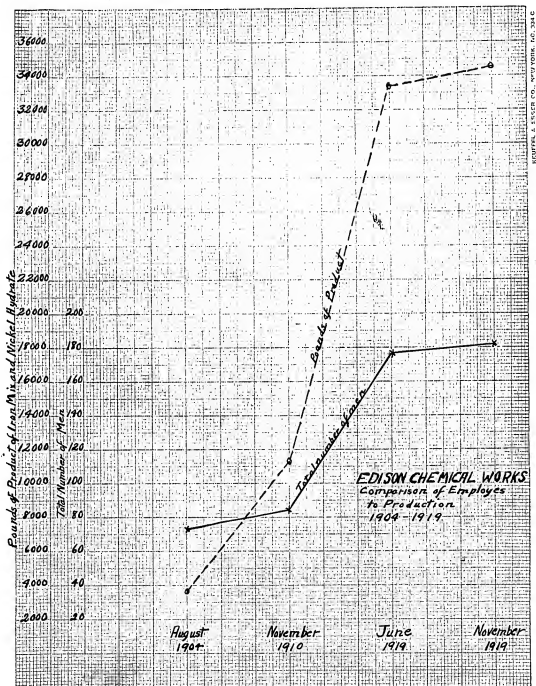
Due to the decrease in our production crew, and changing over to an eight hour a day arrangement, we expect to reduce the force at once, to some extent, although the production department will continue to have practically the same number of men, but they will be divided into three shifts, whereas they were on two shifts.

Yours very truly,

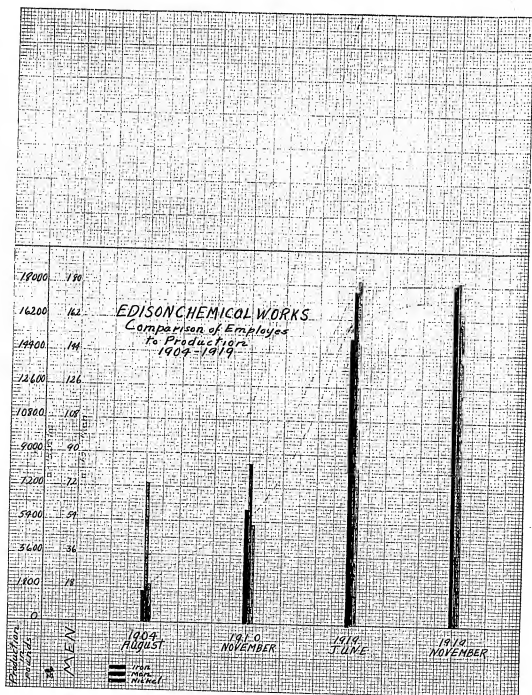
Miller
DIVISION MANAGER.

JVM:FTB

[ENCLOSURE]



[ENCLOSURE]



Dec. 12, 1919.

✓
FROM Arthur Mudd, Secretary
TO Mr. Charles Edison, Mr. S. B. Mambert, Mr. C. E. Sholes,
Mr. H. F. Miller, Mr. J. V. Miller.
SUBJECT Approval of contracts by Mr. Thos. A. Edison, President.

The following is an excerpt from minutes of meeting of Board of Directors held Thursday, Dec. 11th.

"The Chairman stated that the President, Mr. Thos. A. Edison, had requested that no contracts be authorized or approved and ratified by the Board of Directors of Edison Storage Battery Co. unless said contracts shall have been personally approved by him.

In view of the wishes of the President the members of the Board present, viz: Mr. Charles Edison, Mr. S. B. Mambert, Mr. C. E. Sholes, Mr. H. F. Miller and Mr. J. V. Miller, constituting a majority of the Board of Directors, stated that they would individually and collectively, as officers and directors, withhold their approval from any and all contracts which might be submitted to them, unless said contracts shall have been previously approved by the President of the Company, Mr. Thos. A. Edison, or until Mr. Thos. A. Edison shall have withdrawn his request."

ARTHUR MUDD,

Secretary.



CHARLES EDISON.

DIVISION: Export Division of Edison Storage Battery.
SUBJECT: Munnott Agreement.

Memo. No. 127

Date 12/15/19.

Mr. Walter Stevens:

Mr. Edison is satisfied that our case is strong enough against Munnott to win in arbitration. He realizes fully the several weaknesses of our defense when Munnott starts making counter-claims. Also that if we were to lose the arbitration we would have to go on with the old contract for all time, unless it were breached at some future time. The heavy damages we might be subject to do not frighten him, as he believes that in the long run we would be better off without Munnott than with him under the present contract, and is willing to gamble damages against freedom.

He wishes us to make no contract or agreement of any kind with Munnott but to continue to furnish him batteries to meet his needs under a "straight order" basis. If we do this and refrain from making any great attempt to push the sale of batteries in Munnott's territory through other channels until the arbitration is settled, he feels that the damages cannot run into very large figures.

Please be governed accordingly.

CHARLES EDISON.

Approved

*"Munnott did not know the price
of the new and same enough"
Ed*

CHARLES EDISON.

DIVISION: Export Division of S. B. Co.
SUBJECT: Monnet Agreement.

Memo. No. 158

Date 12/15/19.

Mr. Edison:

Before acting definitely on the Monnet matter as outlined in the attached to Stevens, I want to feel sure once and for all that you do appreciate the weaknesses that we may have to explain away in arbitration somehow.

Personally, I feel that your directions are exactly what we should do, with this point, however, still in doubt in my mind. Under English law, can a person break a contract and refuse to supply goods, etc., after arbitration has gone against him, by merely paying a lump sum cash damages?

Or, if the arbitration goes against him, can he be forced to continue to supply goods, etc. and conduct business under the contract during its life, and if he resists this order and flatly refuses to go on, can they seize goods or send him to jail or subject him to payments of continuous damages?

If the first is true, then it seems to me the risk we are taking is small. The the second is true, then it seems to me that the risk is great.

Should we not get some English Solicitor's opinion before committing ourselves to a definite course of action?

Enc-

CHARLES EDISON

Rec'd by JAC 12/15/19

BATTERY - STORAGE

Wambert

*Sholes is leaning towards
Do. 20. 1938
Centralizing them we can have
not the system
which we must
stick to*

FROM: Mr. C.E. Sholes, V.P. & Gen'l Manager
TO: Mr. J.V. Miller, Manager Chemical Works
SUB: Classification and Analysis of Payroll by Departments

Based on your report and in accordance with table attached hereto, the following conclusions are drawn:

There are 225% more employees on private payroll at Chemical Works than at Storage Battery Plant.

The number of employees on Private Payroll on production (foremen and superintendents) is 529% greater than at Storage Battery.

The relationship of employees in the Maintenance, Engineering, Chemical and Electrical Laboratories, Accounting and Executive offices to the total number of employees is greater at Chemical Works than at Storage Battery. On Inspection and Stores the relationship is greater at Storage Battery.

While the relationships brought out in the attached table are not entirely comparable, it does seem that if the Accounting were centralized some reduction could be made. It should be particularly noted that the number of accounting employees for the Storage Battery also includes the employees on Sales Accounting.

It would of course be difficult to combine any other functions, but it is not unlikely that were the two plants combined the percentage of indirect labor could be reduced.

No consideration has been given the Sales or Purchasing Departments since these may be taken as common to both Chemical Works and Storage Battery plants.

Very respectfully,

C.E. Sholes, Gen'l Manager.

C-C to Mr. Thomas A. Edison
C-C to Mr. Charles Edison

CO-2

30FY

December 22nd, 1919

Battery, Storage

✓
FROM: Mr. C.E. Sholes, General Manager.
TO: Mr. Lannahan, Legal Department.
SUB: Edison Storage Battery Co.
 Vt.
 Public Service Electric Co.

Referring to yours of Nov. 13th and 26th and Dec. 13th and copies of decision of the New Jersey Supreme Court, Statement of Public Service Electric Co., letter from Mr. Egner of McCarter & English, etc., etc., it is respectfully submitted:

1. This matter was considered at meeting of Board of Directors held on the 18th inst. and it decided that this company would not for itself appeal from the decision of the Supreme Court, but
2. The General Manager will advise the Manufacturers Association of New Jersey of some of the facts, omissions, and procedures, which seem extraordinary to us.

Incidentally, the writer does not concur in very many of Mr. Egner's conclusions, and understands that the U.S. Supreme Court has already held (unanimously) that the Constitution forbids the Legislature to pass any law impairing the obligations of a contract.

Respectfully,

C.E. Sholes, Gen'l Manager

C-C to Mr. Charles Edison
C-C to Mr. Hambert



DEC 23 1919

EDISON STORAGE BATTERY CO.

Memorandum

December 26, 1919.
Desk #6-3-5341

Mr. W. H. Meadowcroft,
Laboratory.

Confirming our telephone conversation of this date, the attached is a copy of a letter received from the Walker Vehicle Co.

Will you kindly advise if Mr. Edison can furnish the information requested, particularly that mentioned in the 4th paragraph.

23

EDISON STORAGE BATTERY CO.,
John Kelly, Gen. Sales Mgr.

By *W.H.B. Crawford*,
Sales Engineer.

(7)

As far as I know up to the present time all motors have been designed simply as Motors without any regard to the battery either Lead or Edison -

I know that in most cases the additional expense of say 2 dollars on a motor would save the ~~cost of a truck~~ 20 dollars worth of battery or ~~the cost of a motor~~ A motor battery of vehicle wiring should be designed as a unit so that maximum mileage should be obtained at the minimum cost. I have had trucks come to Laboratory belonging to different Mfg Cos. ~~which~~ for a good ~~time~~ during which time I made tests.

Edison
Meadowcroft
I wonder if this is what
he wants, if so
say I made the
following notes
on his letter

2

My advice is that you only
 consider the Motor, wiring,
 + Controller ~~separately~~
 + battery as a whole

I put the problem up to
 the Engineers of the
 Genl Elec + Westinghouse
 Cos to give plans & bids
 for the Motor + Controller
 We will do the same on
 the battery, & that we
 all cooperate to produce
 the greatest per ton mileage
 for the minimum investment
 + amortizement. Taking
 Everything into consideration
 This has never been done

3

~~Some~~ railroad any exception
 Every truck including those
 made by the General Electric
 lost so much in the wiring
 that from 50 to 150 dollars
 worth of battery had to
 be used to make up for the
 drop in voltage, yet from
 5 to 10 dollars added to
 the Copper would have
 saved this investment in
 battery - Also in the
 struggle to cheapen things
 the Controller had ~~too~~
 insufficient contacts, again
 a saving of per 2 dollars
 cost 15 to 20 dollars
 more investment in battery

[ENCLOSURE]

COPY

WALKER VEHICLE COMPANY

Chicago, Ill.

December 18, 1919.

SUBJECT: MOTOR DESIGN

Edison Storage Battery Company,
Orange, New Jersey.

Gentlemen:

We are now considering the re-design of our entire line of motors with the object of developing the best type possible for use with 60 cells "A" type batteries in localities where the streets are comparatively level and the pavements good, and with 54 cells "A" type batteries where trucks will operate in hilly districts with grades up to 15%, or on poor pavements.

Our object in writing to you is to obtain, if possible, Mr. Edison's recommendation as to the two best men and companies that we can engage to accomplish the best results.

As our export business now extends over most foreign countries, we prefer to purchase our motors from either Westinghouse or G. E., due to their foreign and domestic organizations, but we first desire to determine the detail specifications of the best line of motors for use in Walker chassis equipped with Edison "A" type batteries.

In other words, while our present line of motors are giving satisfaction to Walker truck users, we know that the design can be improved and desire to obtain the ultimate type now, due to the fact that it is our intention to expand our production to sales limit.

We, therefore, trust that you will realize the importance of this subject to both your company and ourselves, and we will appreciate any suggestions Mr. Edison or anyone else in your organization will make.

Very truly yours,

(Signed) C. A. Street

General Sales Manager.

Dec. 29,
1919

Maxwell might use him
as a general man to approach he has
first address - would be liked by most people

Mr. Edison
Mr. Charles

undivided from others he is inclined to be
lazy & has no imagination, if any thing is

ATTACHED LETTER FROM CHITING IS FULL OF HUMOR
dem. I suggest information from outsiders in
INTEREST AND THROWS A SIDE LIGHT ON OUR ORGANIZATION. It is
THOUGHT SHOULD BE OBTAINED, AS TO HIS BUSINESS
NOTE WORTHY THAT ABSOLUTELY NOTHING IN HIS PREVIOUS EXPERIENCE
CAPACITY, JUDGMENT, ETC. PERSONALLY HE
WOULD LEAD ONE TO THINK HE POSSESSED SELLING CAPACITIES IN
IS A FINE MAN, WHICH IN SOME
ADDITION TO HAVING A GOOD PERSONALITY.

poisonous is all that necessary
NOT TO THINK THAT IT HAS TAKEN US SEVEN YEARS
BUT IN ABOUT 6 OR 7 SOMETHING
TO LEARN THAT HE DID NOT FIT INTO SELLING WORK. NOT VERY
CREDIBLE OF US. More is required

WOULD A MAN WHO HAS COME UP FROM THE

RANKS, THE WAY THIS MAN HAS ADVANCED, MAKE GOOD MATERIAL

FOR A BUSINESS MANAGER OF MANUFACTURING OPERATIONS? I THINK

HE WOULD POSSESS CERTAIN QUALITIES VERY DESIRABLE FOR THIS WORK.

AND PROBABLY WOULD BE ABLE TO MESH INTO SUCH WORK WITHOUT

CREATING FRICTION. IF SUCH IS THE CASE, AND WE NEED

ADDED SUPERVISION OF THIS CHARACTER IN WORKS, CAN WE TRY

HIM OUT FOR A TIME.

WE HAVE NEVER SUCCEEDED AS YET IN BUILDING
UP THE SUPERVISION OF WORKS DESPITE SPENDING HUNDREDS OF THOUSANDS

of Dollars Annually to the point where Mr. Edison's Ideas as
expressed after the fire, may be said to have honestly had
a fair trial. To carry out Mr. Edison's Plan, it is absolutely
essential that we have a High Grade Man on each floor.
So far we have failed, because our men have not stood out
prominently as High Grade Leaders.

Most of the Value of our Best Work and
Improved Knowledge of Trets is now wasted, because no man directly
on the floor is constantly going over the Trets, individually and
with others, to encourage ways and means of making improvements.
Mr. Lunt, Mr. Harker, and Mr. Everett do not have the time to do it.

I have not talked to Mr. Cutting, for three
years and so do not know what he would absolutely fit - but
I thoroughly believe that High Grade Men introduced into our
organization will pay us in the long run.

What do you think?

Costing \$4500. Yearly.

Could probably get him to take less if necessary.

Maudslayi
12/21/14

[ENCLOSURE]

172 Valley Road, West Orange, N.J. Dec. 27th., 19.

My Dear Mr Mambert
I was most agreeably surprised at receiving a Christmas card from Mrs Mambert and yourself as I had no idea that you were aware that I am still in this part of the country. The act of sending a Christmas card would evidence at least no unkindly feeling towards me on your part, and this is also surprising to me as I was given to understand by Mr Sholes when I was kicked out that "The Board had wondered that he had kept me on as long as he had".

In any event, I am here, (brought on from California by Mr Sholes) and the thought has occurred to me, since receiving your card, that perhaps you could assist me in finding that thing which I most want to do. I am attaching a copy of my service record from 1888 up to date, and would explain that while I was handling considerable numbers of men on the Southern Pacific, I made it my business and pleasure to give aid, sympathy, advice, etc. etc. to my men (as well as my girls) when ever the opportunity offered - never intrusively of course - and I have acted both as Judge and Jury on innumerable divorce cases, drunkenness, troubles of various kinds; have gathered men up off the track and gone to their homes and broken the news to their families as gently as possible, arranged all the details of the funeral, and later on have secured a position for some member of the family; and in every way I have tried to do good where ever it was possible.

Since coming with the Edison Storage Battery Co. seven years ago, I have missed the opportunity of doing very much along the lines as written of above, and I have often wished that the time would come when I would again have a chance to do more of that for which it has been stated I am best fitted - namely, some executive work where a large amount of human kindness and sympathy are desirable.

I had even hoped that in leaving California and coming on East, I would eventually find a place in the Edison organization where I could have something to do with the human element, and do that thing that I have so long wanted to do.

Instead of any such chance, I found a brutal man in authority; drunk with power - unkind, overbearing, and domineering towards the rank and file and feared and hated by all of them, hoping that either he would get out or that they could find something else to do at some other place, and when I had the nerve to protest to Mr Sholes about John Kelly's rough treatment of the poor, scared creatures, I was told to attend strictly to my own business, etc. etc. etc. etc.

Enough of this - it is all passed so far as I am concerned; the Edison Storage Battery Co. did not want my services any longer, but as my coming on East was considered by my many friends on the Pacific Coast as a well deserved promotion for faithful service, I would like to connect with some good concern here if possible, and as I have heard much of your own kindly nature, I am prompted to ask if you would be willing to advise me as to methods for getting in touch with some

[ENCLOSURE]

(2)

thing, where I could bring to bear my considerable practical experience along electro-mechanical lines and perhaps have a chance to help smooth out some of the human tangles that might need the kind of help that I could give if I were afforded the opportunity.

I have had such splendid success in some of my past work that it has seemed to me that with all the prevailing unrest, there should be a place for me in some plant to act as a sort of "Shock Absorber" to meet the men, hear their grievances, convince them of my own desire to see that they get a square deal, but at the same time looking out for the best interests of my own employers.

perhaps
As you have forgotten me during the three or four years since I was in your office, I am taking the liberty of enclosing my picture, which I would ask that you kindly return after it has served the purpose of refreshing your memory.

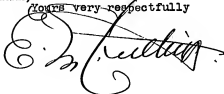
In closing, I wish to say that I very sincerely trust and desire that nothing that I have said regarding my experiences at Edison Storage Battery Factory, will result in any controversy, as under the existing conditions, I am more than glad to be out of there, but I did feel that, in calling upon your help in securing a new position, I might be permitted to present a little of my side of the story.

If, after you have had time to read this, you feel that you could, or would care to talk with me regarding the kind of work that I have done, I would appreciate it very much if I could see you at some place other than your office, as a visit there might be misconstrued. I am living at 172 Valley Road, West Orange, Phone Orange 3799-W.

Thanking you very much for your consideration of this matter,

I remain,

Yours very respectfully



[ENCLOSURE]

- 1888 Commenced working for Southern Pacific R.R.Co. in Signal Dept.as an Apprentice and progressed slowly to Lineman,Wireman,Signal Repairman, Signal Shopman(Bench,Lathe,Forge)Extra Fireman S.P.Electric Light Plant, Extra Signal Towerman,Signal Construction Foreman,Extra Engineer of Lighting Plant.
- 1892 Resigned to take position as Chief Electrician Piedmont Cable Co., a combined cable and electric street Ry. After two months, promoted to End Engineer in full charge of afternoon and evening watch. There were 18 engines, 5 dynamos and 6 steam boilers in the plant, and 12 miles of cable passed through the house every 23 minutes.
- 1894 Returned to Signal Dept.S.P.Co.same work as before, excepting more of the time Foreman on new construction, and generally increased responsibilities.
- 1897 Appointed Signal Supervisor in charge of Signal Operation, Maintenance, and Construction, including the wiring of Depots, Shops, Roundhouses, Ferry Boats, installation of Shop Motors, Telephones, Lines and Phone Switch Boards.
- 1905 Given charge of all Electric Lighting of Passenger Cars on S.P. lines in addition to Signal work.
- 1909 Appointed Engineer of Train Lighting-Heating-Ventilation in charge of Train Electricians running on trains, Car Wiring, Coach Yard Electricians, Finish Gas Plants, Gas Lighting of cars, Locomotive Head Light Wiring and Locomotive Head Lights.
- 1908 Got 10 Car Lighting men from various Rail Roads to meet at Ogden, Utah where was started the Association of Railway Electrical Engineers. In the Fall of 1909 was elected President and served one year.
- 1912 Resigned from S.P.Co. to accept position as Western Manager of the Edison Storage Battery Co., commencing Jan. 1st., 1913, with headquarters at San Francisco. I had charge of the Sales and Service work in the 11 Western states for 7 years, reporting to the V.P. & General Sales Manager at Orange, N.J. I opened offices in Seattle, Portland and Los Angeles and appointed Resident Managers reporting to me. I also made selling arrangements with men or concerns in various parts of my territory to handle the Battery.
- From a few thousand dollars a year, built up the business to as much as \$250,000.00 to \$300,000.00 per year. This is small in comparison with other parts of the country, but the territory was hard to cover as it comprises a third of the area of the U.S. with only 6% of the population.
- 1919 Invited to come to Orange to take charge of the R.R.Dept. Upon arrival was made Asst. Sales Manager.
- Sept. 1919 December resigned from Edison Storage Battery Co.
- Dec. While with Southern Pacific was given credit for special ability in handling men. In 1903 started a Signal School for my men, where I taught from large drawings that I had prepared and from working parts set up in shop. This resulted in greater interest, information and progress and I was able to promote men to better positions on other Divisions and also to other Rail Roads.

I am deeply interested in all Betterment Work so far as it is practicable and carried out with discretion and common sense. Can mix freely with all men and at same time never have had any trouble commanding respect and securing willing obedience.

B.M.Cutting.
Room 827 #200-6th Ave., New York City.

1/9/19

Mr Edison

The Board has
approved - subject to your
approval - and provided
we can get permission
to sublet to satisfactory
sub-tenants if and when
desired.

Sholes

[ENCLOSURE]

SB-1554-1084-116
Old No. 2682

EDISON STORAGE BATTERY CO.

Massachusetts

Jan 9 1920

January 6th, 1920
Desk 43-11-77

FROM: Sales Committee
TO: Mr. C. E. Shoes
SUB: Additional Office Space for Chicago.

I approve but you should provide some place to move into temporarily after vacating present place for my opinion. The building will not be ready. Considering the weather, labor, etc.

For your reference we beg to quote from Minutes of Sales Committee meeting held January 6th:

"Mr. Venie presented letter from Messrs. Moore & Rifort of Chicago, Ill. with reference to building which they propose to build for our use. This communication was accompanied by a letter from Mr. Butler urging immediate consideration for matter of new quarters on account of his present lease will expire on April 30th, and that the owner will want a substantial increase in rent and that the present premises are now very inadequate."

I never knew of a case that was so many that was not a case. The Edison

After very careful consideration of the several suggestions and proposals which have been made it was, on motion duly moved and seconded

VOTED, that in view of the importance of our Chicago business, which during our last fiscal year was about \$859,000.00; that the service station at Chicago must also attend repair work of St. Louis, Kansas City, St. Paul and it is also frequently called upon for assistance to New Orleans, Denver and to help Detroit and Canadian service, this committee approves and recommends to the Board of Directors that we accept proposal made by Messrs. Moore & Rifort as agents for the vacant property at 3130 & 3132 South Michigan Avenue, on which they propose to erect a two story building with approximately 15,500 square feet, and with a handsome green and white tile front (similar to building erected for the Packard Co.) and which they will lease to us for a period of 15 years at 9% of the cost of the building estimated at \$40,000.00 (not to exceed \$50,000.00) plus the taxes and interest, and which would make the annual rental cost not exceeding as follows:

[ENCLOSURE]

SS-154-10M-116
CM No. 262

EDISON STORAGE BATTERY CO.

Memorandum

-2-

Jan. 6, 1920.

9% on \$50,000.00	\$4,500.00
Taxes and Interest, estimated	900.00
Ground Rent	<u>1,250.00</u>
Total	\$6,550.00

and we may discontinue at the end of 10 years by paying a bonus of 10% on the cost of the building.

In this connection this committee calls the attention of the Board of Directors to the fact that the present premises are not only too small to give suitable service to our large business in Chicago, but that the situation is such that we are constantly questioned by the police on account of vehicles back of present building in alley; that with the new building we would have ample space for increased repair work, and which would undoubtedly enable us to earn sufficient to pay for the increased cost of rent; that we could probably obtain a clause permitting us to sub-let to tenant acceptable to the owners, and that this committee does not feel that the 10 or 15 year period is at all unreasonable on this proposition or includes any serious risk of finding ourselves in any undesirable location.

As regards to the location, this committee views that it is perhaps ideal in view of the fact that it is on a direct route and not far from the Walker Vehicle Company, Mercury Manufacturing Company, Chicago Stock Yards, etc., etc. Furthermore, it is believed that if the matter is immediately decided that the building can be finished and ready for occupancy on May 1st or immediately after our present lease expires."

Will you be good enough to present this subject at the next Board meeting, and advise us of their decision in order that we might wire Mr. Butler?

R. C. NEALE,
Secretary.

APPROVED

192

CE _____
TAE _____
SBM _____
CES _____
HFM _____
JVM _____
TIO _____

Directors

EDISON STORAGE BATTERY CO.

Memorandum

January 21, 1920.

FROM: Mr. C.E. Sholes, Gen'l Mgr. E.S.B. Co.
TO: Mr. Meadowcroft, Sec'y to Mr. Thomas A. Edison.
SUB: Seaboard By-Product Coke Company.
Jersey City, New Jersey.

Charles - You know about this

When we had in mind taking over Mr. Edison's property near the Belleville Turnpike in Jersey City and were considering the possibility of locating the Silver Lake plant at that point, Mr. Mac Arthur of the Seaboard By-product Coke Co. told us confidentially of some new arrangements which he proposed to make for railroad facilities and which would be a help to all concerned and asked to buy the triangular strip between the Belleville Turnpike and the Erie Railroad.

Of course our plans went awry but it seems that the Seaboard Co. desires to complete their arrangements and Mr. Mac Arthur has therefore asked us to please learn if Mr. Edison would sell this triangular piece of property and if so at what price.

Will you kindly communicate direct with Mr. D.C. Mac Arthur of the Seaboard By Products Coke Co., or command the undersigned, and greatly oblige,

Very respectfully,

C. Sholes

C.E. Sholes, Gen'l Mgr.

Mr. Meadowcroft -

*Please tell him
that Mr. Edison
won't sell - at
least for the present -
See attached -*

E.

EDISON STORAGE BATTERY CO.

Memorandum

Feb'y 11, 1920.

FROM: Mr. C.E. Sholes, Gen'l Mgr. E.S.B. Co
TO: Mr. Meadowcroft, Sec'y to Mr. Thomas A. Edison
SUB: Board of Product Udon Company,
Jersey City, New Jersey

With further reference to our letter of Jan. 21st and the small piece of property which they desire to purchase, please be advised;

(1). During today, Mr. C.W. Flanders representing the Sonboard Hy-Products Co. called upon us and left the enclosed map showing the small triangular piece of property which they desired to purchase and concerning which they particularly asked to know if we will sell.

(2). From the location of the piece that they desire to purchase, you will note that it includes practically all our frontage on the Belleville turnpike, and for this reason

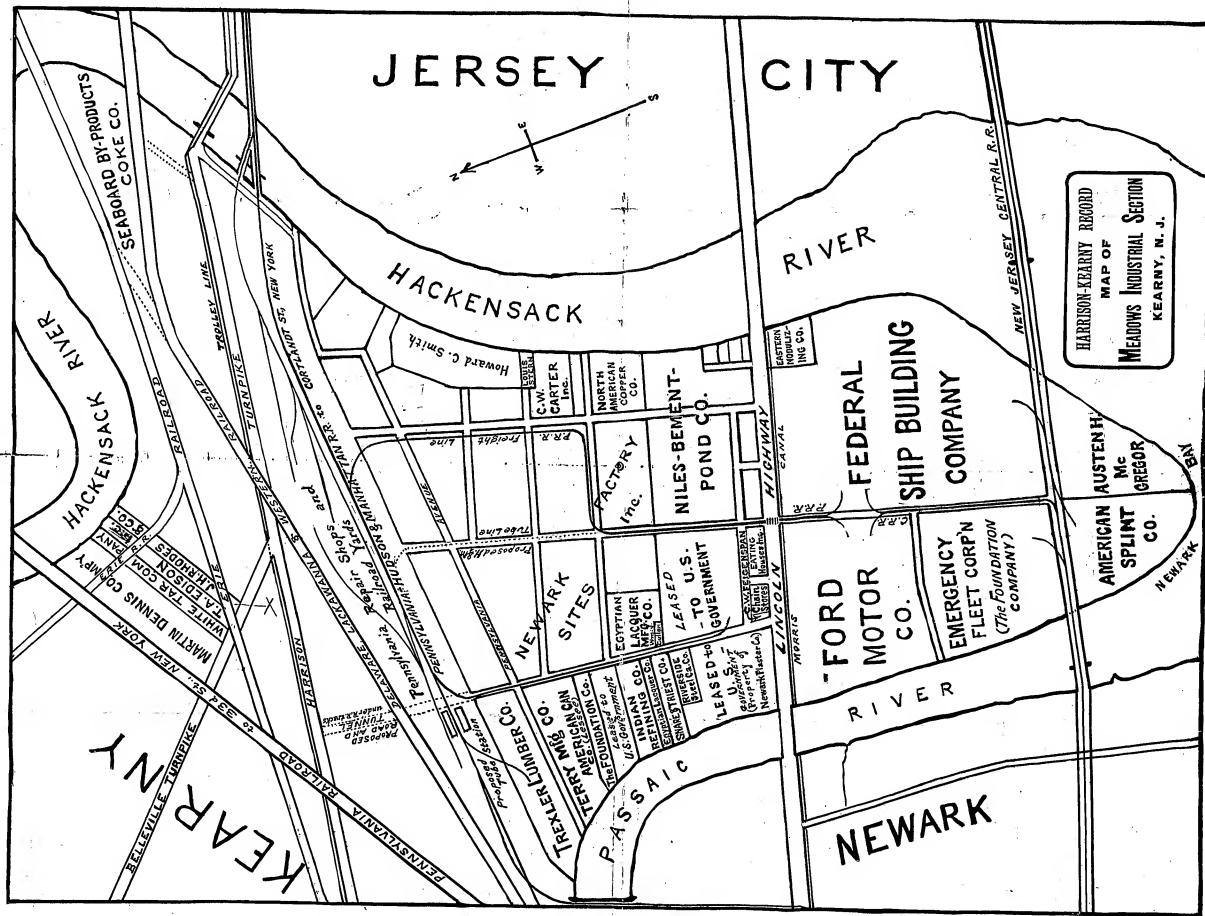
(3). We would recommend that this concern be advised that Mr. Edison is not interested in petitioning the property, at least for the present.

Asking the favor of your consideration and reply, we remain,

C.E. Sholes

C.E. Sholes
Vice Pres't & Gen'l Mgr.

*Charles -- We don't want to sell --
much less the very small piece growing
us Entrance by the Belleville road,
These people must be clean crazy
to think we would 1/4 acre a lot and
off from getting at our property -- They are,
German & this must also be (the German mind)*
2



THOMAS A. EDISON, PERSONAL.

Office of Secretary

February 16th, 1920.

Mr. Thomas A. Edison:

The Storage Battery Company asked us for an order covering work on three samples of specially welded positive tubes delivered by you to them to be loaded with positive tube material and tested to determine effectiveness of construction.

May I trouble you to say whether this is some new work with which you are experimenting or whether it is to be charged to some order on which you are now engaged and if the later to what experiment we are to charge it?

R. W. KELLOW

Secretary

This is a trivial experiment worth 10 to 15 cents - why carry detail to such a limit

Mrs. Ryder-

I didn't get any further word from Mr. Edison on this before he went South. O'Dair says he did quite some work on it and is awaiting Lab. Interfunctional order. Will you please wind it up? If Louis Ott can't give you the full dope, can't we let O'Dair tell Lab. and carry until Mr. E. returns?

PG-D

Rec'd 3/1/20

Battery, Storage

Edison will be not more than 100.00 - (may be more) - Experiment for Edison

For Mr. Secretary Ott, this is nice conversation with Recalling Alush. Rec'd 3/1/20

C 100

FROM—

March 27, 1920.

TO—

SUBJECT:

Edison Accumulators, Ltd.,
2/3 Duke St., St. James,
London, S.W.1, England.

and
John Ferreol Lammot,
London, England.

Gentlemen:

The Edison Storage Battery Company hereby offers and agrees to sell to Edison Accumulators, Ltd. and Edison Accumulators, Ltd. agrees to purchase from Edison Storage Battery Company upon the following conditions:

Material

All commercial types of Edison Storage Batteries, present and future.

Territory

Edison Accumulators, Ltd. is to have the exclusive sale of the Edison Storage Battery to customers in and for use in Great Britain and Ireland except that the Ford Motor Company shall have the right to import into such territory Ford cars equipped with Edison Storage Batteries for starting, lighting, ignition, or any other purpose excepting propulsion, and to import Edison Storage Batteries required for such purposes for Ford cars manufactured in such territory, and to use and sell in such territory such cars so equipped. As to other places the right of Edison Accumulators, Ltd. to sell shall be non-exclusive, except that it shall have no right to sell to customers in or for use in the United States, Canada, Australia, New Zealand, British East Africa, Union of South Africa comprising Cape of Good Hope, Natal, Transvaal, Orange Free State and Rhodesia, or any other country, colony or possession (other than Great Britain and Ireland) as to which Edison Storage Battery Company has or shall hereafter make an exclusive sales contract or arrangement. But in such event, Edison Accumulators, Ltd. shall be entitled to 90 days' notice of such curtailment of its non-exclusive selling right and shall have 12 months from the date of such notice within which to fill orders accepted prior to the date of the notice.

Quantity

Edison Accumulators, Ltd. agrees that it will not handle, sell nor offer for sale any Storage Batteries or parts thereof other than those purchased hereunder and that it will purchase from Edison Storage Battery Company its entire requirements of Storage Batteries and parts thereof for all purposes, but which shall not exceed 5000 A-4 Type Cells

FROM—

TO—

-2-

SUBJECT:

per month or the ampere hour equivalent thereof in cells having the same sized tubes and 1500 G-4 Type Cells per month or the ampere hour equivalent thereof in cells having the same sized tubes, except that said quantities may be increased upon six months' notice by 1500 L-4 Type Cells or equivalent and by 700 G-4 Type Cells or equivalent until the total quantity hereunder shall be equal to 12000 L-4 Type Cells per month or the ampere hour equivalent thereof in cells having the same sized tubes and 6000 G-4 Type Cells per month or the ampere hour equivalent thereof in cells having the same sized tubes, but such notices shall not provide for any increase within less than 6 months after the next preceding increase.

Quality and Interaction

Equal to commercial standard existing at the time of shipment, Edison Accumulators, Ltd. may return to Edison Storage Battery Company at the expense of the latter, positive or negative plates that fail to give standard performance (i.e. in accordance with standards of Edison Storage Battery Company) on formation or any other parts that show defective manufacture. Edison Storage Battery Company agrees to replace such defective plates or parts at its expense delivered in London at the earliest possible date after receipt of material complained of.

Price

United States list prices on date orders for prompt shipment are received and accepted by Edison Storage Battery Company and United States list prices current on date of shipment of orders accepted for future delivery, for all standard type cells and parts, less discounts and allowances as follows:

Upon all standard types A and B Cells, unformed, with dry electrolyte, and parts, a discount of 25% and after such deduction an allowance of 5% to cover cost of maintenance of service and your guaranty to customers and 1-1/2% thereafter to cover cost of forming. After such deductions a discount of 2% for cash against shipping documents F.A.S. New York.

Standard C and L Cells, unformed, with dry electrolyte, and parts, a discount of 20% and after such deduction an allowance of 5% to cover cost of maintenance of service and your guaranty to customers and 2-1/2% thereafter to cover cost of forming. After such deductions a discount of 2% for cash against shipping documents F.A.S. New York.

FINANCIAL MEMORANDUM NO.

DATE

EFFECTIVE

FROM—

-3-

TO—

SUBJECT:

Standard Miner's Lamps complete, types L-8 and parts, 40%, plus $\frac{1}{2}\%$ additional for cash against shipping documents, F.A.S. New York.

Electrolyte 10%, plus $\frac{1}{2}\%$ additional for cash against shipping documents F.A.S. New York.

All United States list prices and all discounts and allowances subject to change on 60 days cable notice by Edison Storage Battery Company, but Edison Accumulators, Ltd. shall never be quoted lower discounts than the then current discounts extended to large buyers in the United States, plus the above allowances for forming, etc.

Terms

Cash in New York against shipping documents F.A.S. New York.

Deliveries

As close to the dates indicated on your formal purchase orders, issued to conform herewith, as the use of reasonable diligence on our part will permit. It is understood that strikes, fire, acts of God and the public enemy, inability to obtain materials except at exorbitant prices, delay in obtaining materials, or any other unforeseen or unavoidable cause, unless due to the failure of Edison Storage Battery Company to use reasonable diligence, shall entitle the latter to reasonable delay in filling such orders, and in such event it shall have the right to limit or pro rate its shipments upon such unfilled orders to a quantity equal to 10% of the commercial output of its plant, but if its inability to fill orders is caused by inability to obtain material except at an exorbitant price, Edison Accumulators, Ltd. may supply the material to enable Edison Storage Battery Company to furnish the full quantity.

Guaranty

See Quality and inspection. No guaranty by Edison Storage Battery Company to customers of Edison Accumulators, Ltd.

Formation

Edison Accumulators, Ltd. agrees to form cells purchased hereunder at its expense and do all things necessary to render such cells ready for commercial purposes. Edison Storage Battery Company to furnish the necessary first fill dry electrolyte.

Service

Edison Accumulators, Ltd. agrees to maintain an adequate organization for giving expert service to its customers during the

COPIES TO— MR. STEPHEN S. HANCOCK—(2)

-4-

FROM:-

TO:-

SUBJECT:

entire time cells are in use by them.

Exploitation

Edison Accumulators, Ltd. and Mr. John Ferroul Monnot agree to at all times use their best skill and ability in promptly and energetically pushing the sale and use of Edison Storage Batteries in Great Britain and Ireland, and Edison Accumulators, Ltd. further agree that so long as this agreement shall continue, sufficient capital will be furnished and suitable and sufficient organization (including battery inspectors) shall be provided and all necessary and usual steps taken to create and promote public demand for Edison Storage Batteries in Great Britain and Ireland and to save for and supply such demand.

Royalties

Edison Accumulators, Ltd. agrees to pay to Mr. Thomas A. Edison a royalty on each cell supplied to it hereunder at the rate of Twenty (20) Cents for each one hundred (100) ampere hours of capacity as rated by Edison Storage Battery Company in addition to the price hereinbefore provided, but only so long as any British patent on storage batteries or any improvement thereon owned or controlled by Mr. Edison shall be in force. Such royalties to be payable quarterly in United States Gold or its equivalent to Mr. Edison at West Orange, N. J.

Period Covered by this Agreement

Five years from the date hereof, subject, however, to cancellation by either Edison Storage Battery Company or Edison Accumulators, Ltd. on 90 days' written notice in the event that any of the stipulations herein set forth are breached by the other. In the event that such breach is disputed the question shall be determined under the provisions of the British Arbitration Law.

Acceptance

Your acceptance of this offer will affect the cancellation of all outstanding agreements between you or either of you and ourselves or either of us and the extinguishment of all claims arising therefrom except payment by you or either of you, of any sum now or hereafter due for any merchandise or material supplied or royalties accrued or accruing under each agreement and except our liability to you or either of you in respect to defective materials supplied, or income tax accruing prior to the date hereof.

Yours faithfully,

FINANCIAL MEMORANDUM NO.
DATE
EFFECTIVE

FROM-

TO-

SUBJECT:

EDISON STORAGE BATTERY COMPANY

Attest:

BY Charles Edison
Chairman of the Board of Directors

Stephen A. Mumbert

Thos. A. Edison

We hereby accept and agree to all of the terms, conditions
and covenants contained in the foregoing letter.

EDISON ACCUMULATOR, LIMITED

By J. F. Lomot
Managing Director

J. Lilly Palmer
Director

Dated: March 27, 1920.

J. F. Lomot.

FROM—

TO—

"Annex to letter Contract of Mar. 27, 1920".

SUBJECT:

Assembly

For the purpose of Assembly only, of cells of our current commercial types, we will sell Edison Accumulators, Ltd. complete sets of component parts or cells with the Steel Containers in a knocked down condition for it to complete and without wooden trays which it will make itself. For these complete sets we will charge it the same prices as for complete cells stipulated in this agreement, less an allowance of $\frac{1}{2}\%$ for the cost of assembling the cells and $\frac{1}{2}\%$ for the cost of the trays.

Electrolyte

Edison Accumulators, Ltd. have the right to purchase electrolyte material to their best advantage provided the quality of same is equal to that supplied by us and sample of such material is approved by us, such approval or disapproval shall be cabled within thirty days after the receipt by us of such samples. Should, however, we give disapproval our reasons therefor shall be stated. Allowance for electrolyte to be made to you from the price of the complete cell.

Cancellation

Should Edison Accumulators, Ltd. in their absolute discretion find that the prices and discounts herein contained have become, for some reason, not profitable to them, they have the right to cancel this agreement by serving Edison Storage Battery Co. with ninety days notice in writing to this effect.

In the event of goods supplied by Edison Storage Battery Co. not being of standard quality, to the extent that $\frac{1}{2}\%$ (five percent) or more, do not develop the rated capacity after forming, Edison Accumulators, Ltd. have the right to cancel this agreement by serving Edison Storage Battery Co. with ninety days notice in writing.

Attest:

EDISON STORAGE BATTERY CO.

Stephen B. Mumbart

By Thos. A. Edison

President.

Thos. A. Edison

We hereby accept and agree to all the terms, conditions and covenants contained herein the foregoing letter.

AUT-CHI XI-526-18-19

FINANCIAL MEMORANDUM NY

DATE

EFFECTIVE

FROM-

-2-

TO-

"AMBOX to letter contract of Mar. 27, 1920".

SUBJECT:

EDITOR ACCUMULATED LTD.

by J. F. Monnot

Managing Director

and

by J. Lilly-Talmer

Director

April 1st, 1920.

COPIES TO:- MR. STEPHEN B. HANCOCK-(1)

USE THIS FORM TO PUT IN WRITING MATTERS OF A CONTINUOUS NATURE, SUCH AS LITTE FINANCIAL PRACTICES--EMBRACING GENERAL POLICY AND INTERFUNCTIONAL RELATIONS.

EDISON STORAGE BATTERY CO.

Memorandum

April 8, 1920.

From: The Orange-Silver Lake Technical Advisory Committee.
To: Laboratory of T.A. Edison.
Subject: Use of reclaimed iron mix in regular iron mixes.

At the 42d meeting of the Technical Advisory Committee held on this date, the use of reclaimed iron in new iron mixes was discussed; and it was brought out that while considerable work has been done on the use of reclaimed iron, exact data was not available at this time. Inasmuch as the present accumulation of reclaimed iron mix compels the use of more than 10% of reclaimed iron mix in new mixes, and further since the exact effect of increasing amounts of reclaimed iron in new mixes not fully known, it was voted, on motion duly made and seconded, that this committee request the laboratory of Mr. T.A. Edison to advise if any data is on file in the laboratory which shows the relationship existing between increasing amounts of reclaimed iron in new iron mixes and the electrolytic capacity of the resultant iron mixes. This request is made with the view of avoiding any duplication of work which has been previously covered by the laboratory.

Respectfully,

The Technical Advisory Committee

E. M. Dunn, *E. M. Dunn*
Chairman

Copies to F.W. Cunningham
H.N. Cox
W.J. O'Dair
T.A. Comm. File

*Say that test cells
were made of different
amounts of reclaimed iron from
5% 10% 15% up to 50 percent
& they must be on file at
Edison Storage Battery Edison*

DATE April 9, 1920

EFFECTIVE

FROM: Secretary, Edison Storage Battery Co.
TO: S. B. Lambert, Vice Pres't and Financial Executive
SUBJECT: Agreement - Edison Accumulators, Ltd.
Ref: "Annex to letter contract of March 27, 1920".

Referring to paragraph one "Assembly", of above, I have checked over the cost figures and would recommend that "an allowance of $\frac{1}{2}\%$ for the cost of assembling the cells and $1\frac{1}{2}\%$ for the cost of the trays" be made and that these percent figures be inserted in the annex to letter contract of March 27, 1920.

The percentages given in the preceding paragraph to apply to A, B, and G type cells. Would recommend that the small type (L type and A type) be not shipped unassembled, although if Edison Accumulators demand the same percentages for allowances can be used.

Attached is a comparative statement showing by cell types the net amount of the allowances for forming, trays and cell assembling, together with the cost figures.

The $2\frac{1}{2}\%$ allowance from list for forming has already been made part of the agreement of March 27th.

The allowance of $1\frac{1}{2}\%$ from list for trays and $\frac{1}{2}\%$ from list for cell assembling are the amounts recommended by the writer in this memorandum. It should be understood that included with "Trays" is "Battery Assembling", that is, putting the batteries into the trays.

The writer's opinion is that these percentages are about as near an average for all types of cells as can be worked out.

It should be noted that the allowances for trays on G and B type cells very closely approximate the cost, and on A type cells there is a very slight advantage in favor of the E. S. B. Co.

On cell assembling, it should be noted that the allowances on A type cells are nearly all slightly in excess of cost, but in averaging all types the percentage used is fair.

-----000-----

Arthur Budd

Secretary

DATE April 9, 1920

EFFECTIVE

FROM— Secretary, Edison Storage Battery Co.

TO— S. B. Lambert, Vice Pres't and Financial Executive

SUBJECT:

Types	2½% List Forming			1½% List Trays		2% List - Cell Assembling			
	List	Allow.	Cost	Allow.	Cost	Allow.	Cost	Over	Under
A-4	19.7b	.36	.27	.21	.27	.27	.29		.02
5	24.50	.44	.30	.25	.34	.33	.31	.02	
6	29.50	.53	.35	.30	.40	.40	.33	.07	
8	38.	.68	.43	.29	.54	.51	.46	.06	
10	48.50	.86	.50	.50	.67	.66	.53	.14	
12	<u>67.25</u>	<u>1.02</u>	<u>.56</u>	<u>.59</u>	<u>.81</u>	<u>.78</u>	<u>.64</u>	<u>.14</u>	
	<u>217.50</u>	<u>3.88</u>	<u>1.41</u>	<u>2.24</u>	<u>3.03</u>	<u>2.95</u>	<u>2.54</u>	<u>.41</u>	
B-1	6.50	.12	.18	.07	.07	.09	.18		.09
2	8.75	.16	.18	.09	.07	.12	.19		.07
4	11.75	.21	.21	.12	.14	.16	.24		.08
6	<u>15.</u>	<u>.28</u>	<u>.26</u>	<u>.16</u>	<u>.21</u>	<u>.22</u>	<u>.32</u>		<u>.10</u>
	<u>43.00</u>	<u>.77</u>	<u>.83</u>	<u>.44</u>	<u>.49</u>	<u>.59</u>	<u>.93</u>		<u>.34</u>
G-4	17.	.32	.22	.19	.18	.25	.43		.18
6	24.25	.46	.27	.26	.27	.33	.61		.26
7	29.50	.54	.29	.31	.32	.42	.66		.24
9	35.25	.60	.30	.39	.40	.51	.72		.21
11	42.50	.81	.41	.46	.49	.62	.82		.20
14	54.	1.03	.48	.58	.62	.79	1.05		.26
18	<u>69.</u>	<u>1.31</u>	<u>.55</u>	<u>.75</u>	<u>.80</u>	<u>1.</u>	<u>1.28</u>		<u>.28</u>
	<u>270.50</u>	<u>5.13</u>	<u>2.57</u>	<u>2.94</u>	<u>3.08</u>	<u>3.94</u>	<u>5.57</u>		<u>1.63</u>
	521.00	9.78	5.81	5.62	6.60	7.48	9.04		1.56

(All allowances) (All allowances)
 (OVER cost) (UNDER cost)
 (except g1-B2) (except G4 (1½))

April 13th, 1920
 DATE
 EFFECTIVE

FROM- Secretary. - Thomas A. Edison, Person
 TO- Arthur Mudd, Secretary, Edison Storage Battery Company.

SUBJECT: Agreement Edison Accumulators Limited.

Thank you for your memorandum B 332 of April 9th enclosing copy of agreement between Edison Storage Battery Company, Thomas A. Edison, Edison Accumulators, Ltd., and John Herivel Monnot dated March 27th and copy of "Annex to letter contract of March 27th, 1920".

I am wondering whether, inasmuch as Mr. Edison is one of the parties to this agreement, a signed copy of the agreement was not provided for him. If you have a signed copy of this please send it to me.

Will the Edison Storage Battery Company or the Export Div. ision report to us the cells supplied under this agreement to enable us to check up with Monnot on royalty statements? It seems to me it would be well for us to receive this report monthly in such shape that we can determine the basis and amount of indebtedness to Mr. Edison on account of these royalties.

Has any particular time been set for the quarterly payment of royalty, that is, are statements to be made on the basis of calendar quarters or otherwise?

I presume that royalties are considered to be accrued as soon as cells are shipped.

Under paragraph entitled "Acceptance" being the last paragraph of agreement, you make reference to the liability on account of "income tax accruing prior to the date hereof". This is a matter, I take it, of interest only to Edison Accumulators, Ltd., and Edison Storage Battery Company, but I do not find any other reference to income tax liability in the agreement.

Can you tell me what disposition is to be made of the balance remaining in our deposit account representing the balance remaining from money advanced by Mr. Monnot at the time of signing what I believe was the original agreement with him and against which a portion of royalty charged him was to apply? I notice that no provision is made for the setting up of an additional amount to this deposit account under the present agreement.

In the first paragraph entitled "Assembly" of the Annex letter contract March 27th, the percentages to be allowed for assembling and cost of trays are omitted on the copy you have sent me.

R. W. KELLOW

Secretary

Edison Storage Battery Co.



EXPORT DIVISION

110 NASSAU STREET
NEW YORK

TELEPHONE, BEERMAN 9738

CABLE ADDRESS
"ZYMOTIC, NEW YORK"
WESTERN UNION, A. B. C.
AND LETTER CODES
USED

April 19-1920.

Mr. W. H. Meadowcroft,
Laboratory,
Orange, N. J.

Dear Mr. Meadowcroft:—

Mr. Geo. M. Wise, Managing Director of the Jost's Engineering Co., Ltd., Apollo Street, Bombay, India, met Mr. Edison some months ago and in a letter just received from Mr. Wise he requests that we send to his Bombay address an autographed photograph of Mr. Edison. As Mr. Wise's company are important clients of ours in the sale of Edison Storage Batteries in India, I am sure Mr. Edison would not object to sending Mr. Wise his photograph to be displayed in his Bombay office.

Mr. Wise further stated in his letter that Mr. Edison had requested him to send particulars regarding certain gums, etc., which were obtainable in India. Evidently Mr. Wise did not understand exactly what Mr. Edison required, and he asks that we obtain this information for him.

If you will kindly forward one of these photographs to me, together with the particulars required, I will be glad to transmit same to Mr. Wise as soon as received.

Yours very truly,

EDISON STORAGE BATTERY COMPANY,

Nathan Sherman

Vice-Pres. & Mgr. Export Division.

Any kind of gums, waxes +
Resins, Except Shellac Resins
or Paraffin wax

WS:J

To

GEO. M. WISE

*Photo sent to
Mr. Stevens
5/10/20*

April 20, 1920.

Mr. E. M. Dunn, Chairman,
The Technical Advisory Committee,
Edison Storage Battery Co.

I sent down to Mr. Edison in Florida, your memorandum of April 8th, in regard to Laboratory data concerning percentages of reclaimed iron mix.

Mr. Edison has sent me a memorandum asking me to say to you that test cells were made of different amounts of reclaimed iron, ranging from 5%, 10%, 15% up to 50%. He says that the records of these test cells must be on file in the Edison Storage Battery Company archives.

W.H.MEADOWCROFT.

Mr. Mannhart

May 27, 1920.

FROM: Mr. C.E. Sholes.
TO: Mr. Thomas A. Edison.
SUB: Unveiling of Memorial Tablet.

(Card)
Edison, T. A. - Honors
of Awards

In connection with the exercises which will be held at 12:30 o'clock tomorrow (Friday), Mr. Charles Edison has said that you would be kind enough to unveil the tablet for us. The general plan is as follows:

1. Part of Handel's "Largo" by the Band.
2. Oration by Ray Hunt, Chaplain of the Edison Industries Post of the American Legion.
3. 3. Unveiling by Mr. Thomas A. Edison and firing of three rounds by squad of Legionnaires while buglers on top of Battery Building sound "taps".
4. "My Country 'tis of Thee".
5. About three hundred girls representing all divisions of the Edison Industries will deposit wreaths and flowers under the tablet.
6. National Anthem.
7. Return march to "Onward Christian Soldiers" by the Band.

If agreeable, I will bring Mr. Hunt to your office at 12:25 and serve as guide (and representative of the Legion) for yourself (and any others whom you may desire to bring), to the proper place beside the tablet.

It is hoped that Mrs. Edison can conveniently attend with you, and that other officials in your party will bring their wives when I will ask the privilege of bringing Mrs. Sholes.

Hoping this is satisfactory, I am,

Faithfully yours,

(C.E. Sholes)



0521 Y2 YAM

EDISON STORAGE BATTERY COMPANY

Memorandum

June 16, 1920;

From: C.E. Sholes, Gen'l Mgr., E.S.B.Co.

To: Mr. Thomas A. Edison.

Subject: Get-together meeting of Edison technical men.

In order that the technical men of the Industries may perhaps become a little better acquainted, an informal gathering has been planned for Monday, June 21st, at 5:30 P.M., in the Assembly Hall (old Restaurant) of the Battery Building.

Allen Rogers of Pratt Institute will give an informal talk, and show some slides and moving pictures of his adventures in the shark leather and oil industry, and which we can assure you will be very interesting as well as amusing.

Mr. Dunn of the Chemical Works Department will also talk informally of his experiences in the copper refining industry, after which we will adjourn to the Restaurant and have supper together.

You are cordially invited to attend.

C.E. Sholes

C.E. Sholes
Vice Pres. & Gen'l Mgr.

C O P Y.

July 7, 1920.

Mr. Maurice E. Fox,
Hotel Seymour, 50 West 45th Street,
New York City.

Dear Sir:

You have informed us that you propose to form a Company on the Continent of Europe, of which you will be the active head, for the sale of Edison Storage Batteries and Accessories. Contingent upon your ability to form such a Company, the Edison Storage Battery Company hereby offers and agrees to sell to you, and you agree to purchase from the Edison Storage Battery Company, all commercial types of Edison Storage Batteries, upon the following terms:-

MANAGEMENT:

This agreement, and all terms and conditions herein, are contingent upon you, Maurice Edward Fox, being and remaining the active head of the proposed Company during the period of this agreement. In the event of your death or incapacity, your successor shall be subject to the approval of the Edison Storage Battery Company.

TERRITORY:

You are to have the exclusive sale of Edison Storage Batteries and Accessories to customers in and for use in Belgium, France, Italy and Switzerland; it being understood and agreed, however, that any American vehicle manufacturer shall have the right to sell and to ship into the territory covered by this agreement vehicles completely equipped with Edison Storage Batteries. It is also understood that the Ford Motor Company may in addition import Edison storage batteries required for starting, lighting, ignition or any other purpose, for use on Ford cars manufactured in such territory, and use and sell in such territory Ford cars thus equipped.

It is understood that we have an agreement with Edison Accumulators Limited, whereby that Company is entitled to ninety days' notice of any curtailment of its non-exclusive selling right in the countries covered by this agreement, and is entitled to have twelve months from the date of such notice within which to fill orders accepted prior to the date of the notice. It is expressly agreed that this agreement is subject to such rights of Edison Accumulators Limited.

QUALITY AND INSPECTION,

All Edison Storage Batteries supplied under the terms of this agreement shall be equal to commercial standards existing at the time of shipment. You may return to us at our expense Edison cells or accessories that fail to give standard performance (i.e., in accordance with standards of the Edison Storage Battery Company), when tested upon arrival, or any other parts that show defective manufacture. The Edison Storage Battery Company agree to replace such defective cells, accessories or parts at its expense, delivered f.a.s. Steamer, New York.

GUARANTEE:

See Quality and Inspection. No guaranty by the Edison Storage Battery Company to your customers.

Page 2.

SERVICE:

You agree to maintain an adequate organization for giving expert service to your customers during the entire time cells are in use by them.

PRICE:

U. S. List Prices current on date orders for prompt shipment are received and accepted by the Edison Storage Battery Company, and U. S. List Prices current on date of shipment of orders accepted for future delivery, for all standard type cells and parts, delivered f.a.s. Steamer, New York, less discount and allowance as follows:

Standard A and B type cells complete with electrolyte, and parts thereof: twenty-five (25%) per cent discount and five (5%) per cent allowance for exploitation, plus an additional two (2%) per cent for cash against shipping documents.

Standard C and L type cells complete with electrolyte, and parts thereof: twenty (20%) per cent discount and five (5%) per cent allowance for exploitation, plus an additional two (2%) per cent for cash against shipping documents.

Standard Miner Lamps complete, type M-S cells complete with electrolyte, and parts thereof: Forty (40%) per cent, plus an additional two (2%) per cent for cash against shipping documents.

Extra Electrolyte: ten (10%) per cent, plus an additional two (2%) per cent for cash against shipping documents.

In each case the discount or allowance is to be calculated on the net amount remaining after the preceding discount or allowance has been deducted.

All U. S. list prices are subject to change without notice. In case of any increase in such prices we shall advise you by cable that an increase has been or is about to be made, to be followed by a letter, in accordance with the paragraph hereof marked "NOTICE", stating such increases definitely, and such increased prices shall not be applied to shipments to you under this agreement until sixty (60) days shall have elapsed from the date of mailing such letter.

All discounts quoted herein may be subject to revision every six (6) months, but with at least three (3) months' advance notification of such revision; but in no case shall discounts be made less than twenty-five (25%) per cent for A and B type cells and parts thereof, twenty (20%) per cent for C and L type cells and parts thereof, and thirty-five (35%) per cent for complete Miner Lamps, M-S cells, and parts thereof.

TERMS:

Cash in New York, against shipping documents, f.a.s. Steamer, New York.

DELIVERIES:

As close to the dates indicated on your formal purchase orders, issued to conform herewith, as the use of reasonable diligence on our part will permit. It is understood that strikes, fires, acts of God and the public enemy, inability to obtain materials except at exorbitant prices, delay in obtaining materials, or any other unforeseen or unavoidable cause, unless due to our failure to use reasonable diligence, shall entitle us to reasonable delay in filling such orders.

Page 3.

EXPLOITATION:

You agree at all times to use your best skill and ability in promptly and energetically pushing the sale and use of Edison Storage Batteries in Belgium, France, Italy and Switzerland, and you further agree that so long as this agreement shall continue, sufficient capital will be furnished and suitable and sufficient organization shall be maintained, (including battery inspectors), and all usual and necessary steps taken to create and promote public demand for Edison Storage Batteries in said territory, and to care for and supply such demand.

PERIOD COVERED BY THIS AGREEMENT:

This agreement shall remain effective for a period of two (2) years from the date of receipt of your notification (either by cable or letter) of the formation of your Continental Company, it being understood, however, that this agreement is rendered void unless we receive your said notification on or before November 1, 1920. It is further understood and agreed that this contract may be extended for one or more successive periods of two years each, if so desired and agreed to by both parties. In case either party shall desire not to extend this agreement for any such successive two year period, such party shall give notice in writing to the other party at least six months prior to the expiration of the two year period then running. In case neither party shall have given such notice and no extension shall have been agreed upon, then and in that event the two year period then running shall be extended for a period of six months.

This agreement shall be subject to cancellation by either party hereto, on ninety (90) days' written notice, in the event that any of the stipulations herein set forth are breached by the other.

NOTICE:

Any notice to be given by us under this agreement may be given by the mailing of a registered letter, postage prepaid, addressed to you or any officer of your Company at your or his last known address, and the date of mailing of such letter shall be considered as the date when such notice is given.

Yours truly,

EDISON STORAGE BATTERY COMPANY

By Charles Edison,

Chairman of the Board of Directors.

Attest:

Stephen B. Mambert,
Vice-President & Financial Executive.

I hereby accept and agree to all the terms, conditions and covenants contained in the foregoing letter.

Maurice E. Fox.

Dated July 7th, 1920.

FUNCTION Edison Storage Battery Co.
 FROM The Edison Storage Battery Supply Co.
 Edison Storage Battery Garage, Inc.
 Arthur Mudd, Secretary

TO R. H. Allen, Assistant Financial Executive

DATE Aug. 7, 1920
 EFFECTIVE

SUBJECT Statement of income, year ending Feb. 29, 1920

Sales	\$6,136,419.81	
Cost to Make & Sell	<u>5,687,118.78</u>	\$479,301.03
Deductions		
Depreciation of Bldgs	89,447.80	
" " Equipment	355,642.66	
" " Patents	158,004.49	
Reserve for Self Insurance	30,330.16	
" " Contingencies	145,709.34	
" " Doubtful Accounts	<u>1,221.09</u>	<u>780,325.54</u>
Net Loss		\$301,024.51

Arthur Mudd
 ARTHUR MUDD, Secretary

EDISON STORAGE BATTERY COMPANY
ORANGE, N. J.

TAE, INC. - 157.4
Reclamation Div.

August 20, 1920.

From: W. J. O'Dair,
To: F. W. Cunningham
Subject: Cell Reclaim Shop

Mr. Edison plans to carry on all reclaim operations at Silver Lake. Since our present method of handling this work will not produce a flaked oxide mixture that is in good condition for reclaiming, Mr. Edison has instructed that no additional cells be opened.

All stocks of cells now on hand are to be shipped to Silver Lake and stored with the Salvage Division. Mr. Schell advises that space is available and will be definitely assigned by Mr. Kiloh, Chief Storekeeper.

Will you please instruct accordingly? It is recommended that the Cell Reclaim Shop operate until all parts of cells now on hand are disposed of, and at a later date arrangements should be made for the transfer of equipment to Silver Lake.

W. J. O'Dair

CC Mr. S. B. Mumbert
F. R. Schell
W. M. Sheldon

WJO'D/JMA

THOMAS A. EDISON, PERSONAL.

Office of Secretary

August 30, 1920.

Mr. C. M. Ryder,
Laboratory Office Manager:

This is the first opportunity I have had to confirm my informal memorandum to you regarding experiment opened on the request of Mr. Altengarten in connection with nickel plating process to be worked on by Mr. Edgerton and charged to Edison Storage Battery Company.

Mr. Edison confirms this request and states that he wishes a separate order opened and the cost kept separate from the order for continuous plating process. It would be satisfactory for you to ask Edison Storage Battery Company for an order.

R. W. Kellow,
Received
Secretary.

Ediphoned
RWK:24

FUNCTION

Edison Storage Battery Co.

FINANCIAL MEMORANDUM No. 6877
DATE: September 1, 1920
Date of Issue
EFFECTING

FROM

Vice President and Financial Executive.

TO

Mr. Frank D. Fagan, Vice Pres't & Gen'l Mgr.

SUBJECT

Rejuvenated Cells.

*Noted
TAC*

Dear Mr. Fagan:

In an informal talk which took place today between Mr. Edison and Mr. Kelly, Mr. Kelly asked Mr. Edison to advise him relative to his policy in regard to Rejuvenated Cells.

Mr. Edison stated that he was now starting upon experimenting and developing a method of rejuvenating cells in accordance with which he thought we would be able to save practically all of the value in a returned cell and that same could be either sold or leased with a guarantee on a basis practically the equal of the new cells.

Mr. Edison further explained his ideas in this regard by pointing out to Mr. Kelly that at the present time, we were selling practically no cells at all, but in reality were renting or leasing them, in view of the fact that our conditional sale based upon a guarantee was more in the nature of a lease rental than in the nature of an unrestricted sale.

This memorandum is for the purpose of keeping you as fully advised, as it is possible so to do.

Wm. H. Mudd

Edison Storage Battery Co.

CHARLES EDISON
Chairman
of the Board



ORANGE, N.J. U.S.A.

OFFICE OF
VICE-PRESIDENT AND FINANCIAL EXECUTIVE

THOMAS A. EDISON PRESIDENT
STEPHEN B. HANBURY VICE-PRESIDENT AND
FINANCIAL EXECUTIVE
D. W. BULLER VICE-PRESIDENT AND
GENERAL MANAGER
H. P. HALLER SECRETARY
ARTHUR HUBB SECRETARY

September 3, 1920.

Mr. C. E. Sholes,
38 Ninan Street,
East Orange, N. J.

*Copy Sent
Mr. T. Edison
"Cable Record."*

Dear Mr. Sholes:

I brought the matter referred to in your letter of August 20th to the attention of Mr. Edison and Mr. Charles Edison, and wish to advise that they consider the arrangement made with you more than fair in view of the conditions and losses made during the past year.

Mr. Kellow has obtained the information which he desired from the copy of the Tidewater Equipment Company Stock Certificate No. 123, which you enclosed in your letter, and I take pleasure in returning same to you.

As you can well imagine we have, all of us, been extremely busy, but fortunately the cool weather during the latter part of August has been of great assistance, and things are "humming" as I have never known them to "hum" before in the Edison Industries.

We had the biggest month in August that we have ever had, and this is particularly gratifying to me in view of the fact that in case of a re-action, I would rather re-act from a large volume than from a somewhat smaller volume as the amount remaining would be more satisfactory.

With kind personal regards, I remain

Yours very truly,

[Signature]
Vice President and
Financial Executive.

[ATTACHMENT]

Mr. Haddock
Indubious
M

CHARLES E. BROWN
38 Adams St-
E. Orange

Mr. Edison ←
Mr. Charles —

Handy read
and initial before
returning.

My dear Mr. Mambrot

Enclosed is a certificate of stock in the ^{of 10/20} Tidewater Equipment Co, which Mr. Kellow ^{Noted by} wants to see. Our patriarchal friend ^{Mr. Kellow} _{Ed.} Mr. Geo Drake Smith strong me for it when I was verdant and by misrepresenting its importance to the Battery Co.

Please put it with Mr Edison's stock, or among the archives of the Battery Co whom I found contracted to spend about \$5000- for worthless models.

See note
on last
page
M

Please be good enough to take up that other matter at once rather than later. I am still confident that Mr Charles Edison aims to be fair - and I would much prefer to have the matter settled before I go away and try to forget - Perhaps you can also help by recalling that, like your good self, I have not taken the vacation to which employees are entitled and might have fairly received two weeks more pay

[ATTACHMENT]

than I did. Also I am quite sure that
I can always repay any considerations - at least
I have always heretofore been able to do so

Sincerely,

Charles E. Snow

Wednesday
Aug 11 1920

Mamert-

7/1/20

Mr. Editor

Mr. Charles _____

Think stock should be
sent back -

Think we should stand
fast on 4 months -

Mr. Snow wishes that he is worthy of further
consideration in the way of salary -

- ① Because he so understood when coming with us.
- ② " " gave up an established life long connections
to serve our interests.
- ③ Because he has sacrificed his home life.
- ④ " otherwise he will actually leave by his year
long efforts to serve us.
- ⑤ Because this unfortunate experience will prove to be
a calamity to his life.
- ⑥ And lastly, because it is only fair.

We offered ~~some~~ 4 months salary
& we will not pay more & if considered
it more than fair in view of the losses
he has made by his gross incompetence.



AUG 12 1920

Don't understand about this stock please explain

THOMAS A. EDISON, PERSONAL

Office of Secretary

September 4th, 1920

Mr. Thomas A. Edison:

Jim Monahan tells me he is about to start on an experiment under your instructions to cover reclaiming all types of Storage Batteries, involving the design of machinery, tools, etc., to disassemble returned batteries and reconstruct from old parts. I have given an order to him this morning to cover the work. Will you please OK this as my authority?

I suppose this will naturally be charged against Edison Storage Battery Company. Jim tells me that it is your idea later to purchase these old storage batteries from the Battery Company, disassemble and renew them and resell to the Battery Co. If experiments results successfully, I presume a factory to do this work would be a pretty fair sized one and probably not be run by you personally but rather would be turned over to some of your interests, probably the Storage battery Company.

R. W. MELLOW,

Secretary

Shop Order C-800-X-334

NOT ISSUED
SAME AS C 300 X 215

C C to Mr. Ryder.

WAT-5504-1-25

FUNCTION Storage Battery
FROM- Vice President and Financial Executive
TO- Mr. W.J. O'Dair, Engineering Assistant
to Mr. Thomas A. Edison
SUBJECT: G-Type Cells

FINANCIAL MEMORANDUM NO. 6921
DATE September 7, 1920
EFFECTIVE Date of Issue

Dear Mr. O'Dair:

At a recent meeting at which were present:

Messrs. Charles Edison
Stephen B. Mambert
✓ W. D. Fagen
John Kelly
R. S. Burrows
G. J. Peck

it was decided that in view of certain technicalities which surround our G-Type Cells of the smaller sizes, that whenever possible, Mr. Kelly and staff would encourage the sale of A-Type Cells in lieu thereof.

Mr. Edison, in connection with this matter, has suggested that you look into the rating of the smaller sizes of G-Type Cells, for it may be that a re-rating of same will in a large measure eliminate the cause of some of the difficulties which we are now experiencing.

As I understand it, it is Mr. Edison's idea that someone has probably over-rated capacity, making everybody dissatisfied and causing us to lose money, I would suggest that you show him the real capacity tests, that is in sufficient number to serve as a proper advice for arriving at an opinion and give an actual rating in comparison with the rating that has been given, so that Mr. Edison may be in a position to give his advice on the subject.

UNIQUE

Charles - ~~seen~~ all me
about this, too long to explain
on paper —

It is the intent of the Edison Organization that whenever there is sufficient work of any one kind to necessitate continuous time being applied thereto, that the people so rendering continuous service be carried by the division of the business requiring same.

I have in mind the fact that you may be rendering service of the nature referred to above to the Disc Re-Creation Division, which could be equally well supervised and handled entirely within the division.

This matter has been drawn to my attention by Mr. Edison, and I trust that if any economy can be derived along the above lines that you will co-operate with Mr. Pullin in working out same, in accordance with the suggestions made to him by Mr. Edison.

THOMAS A. EDISON, PERSONAL

Office of Secretary

Battery Storage

September 8th, 1920.

77
11/20
11/20
11/20
11/20

Mr. G. M. Ryder,
Laboratory Office Manager.

James Monahan has started, under Mr. Edison's direction, some work in connection with reclaiming all types of Storage Batteries involving design of machinery, tools, etc., to disassemble returned batteries and reconstruct from old parts.

Mr. Edison tells me this is the same experiment as Chemist Moore was working on and Mr. Yee is now working on it, Mr. Monahan to be considered a new man on the old job to do the mechanical work. Mr. Edison further states that the order is not to be charged to Storage Battery Company until he is ready to turn it over.

Mr. Joe Frank says that the order covering this work is C 300-A-215 "Recovering all Nickel Pocket material from old Storage Batteries" and has instructed Mr. Monahan accordingly.

I have asked Mr. Monahan to let us know as soon as he begins to make models of machinery of other work of this nature so that we may keep strict account of it.

E. W. HOLLOWAY

Secretary

new 10.
C 71614
NOTE

file
 Fagan -

Here is a report recd from O'Dair -

Please section, I think we can

fix up the annealing problem fairly

easy - I think our capacity

is sufficient since we got out

of that infernal fool Contract.

What we need is a better disposition

of the heat in furnace -

I will continue investigating

noted
 J. J. (1920)

Σ

[ENCLOSURE]

September 7, 1920.

From: W. J. O'Dair, Technical Assistant
To: Thomas A. Edison, President
Subject: Rolling Mills

On Friday, 9-4-'20, I visited the Rolling Mills of the American Tube & Stamping Co. at Bridgeport, Conn. They have 3 open hearth furnaces; a 24" blooming mill and 3 continuous hot rolling mills. Also 3 cold rolling plants, 2 having 12" rolls and 1 having 18" rolls. Their cold rolling mills are driven on common shafts which have five sets of rolls on one pair of shafts.

Their cold rolling mills operate at roll speeds from 45 to 75 R. P. M. when rolling steel from 10" to 8" wide with an average reduction of 50% from the hot rolled size to the final cold rolled size in 5 passes. Their finished cold rolled sizes of steel are principally above .080".

The rolls are cooled by running the bottom roll in a well containing cooling water and also by having a jet spray on the upper roll. See sketch attached.

I have consulted the Blake & Johnson Co. who built our Rolling Mills and they state that mills can be operated at higher speeds than we are at present using. They say that lower temperatures of cooling water and sufficient volume of water travelling through bearing housings should dissipate the additional heat generated. They also say that a jet spray directly on rolls will aid in keeping bearing and roll temperatures within safe operating limits. I have also consulted the Waterbury Barrel Foundry Co. and they have given me the specifications on rolling mills used by the Trumbull Steel Co. which is herewith attached. These speeds are generally above the speeds at which our mills operate.

I find that on all except 2 of our 6 - 8" mills the motors have 120 volts across the armature instead of the rated 240 volts. This was done to cut down the speed, but also results in reducing power about 1/2. The speeds of the various mills are given in attached table.

It seems that we can increase the speed of our mills on some of the passes, depending upon what effect such increase would have on the material rolled.

W. J. O'Dair.

WJO'D/JMA

WAT-2001-1-02

FINANCIAL MEMORANDUM NO. 6864
 DATE: September 29, 1920
 EFFECTIVE Date of issue

TO: Thomas A. Edison Industries.
 FROM: Vice President and Financial Executive.
 TO: Messrs. R. Maxwell, F.D. Logan, J. L. Closs, L. L. McChesney, R. G. Durand,
 J. L. Burnham, Jr. F. D. Mizer.
 SUBJECT: Consultation with Mr. Edison regarding technique.

Previous to the war it was the custom in our Organization to keep Mr. Edison thoroughly advised of all matters of technique, but this practice was discontinued during the time that he was concentrating on war work. During his absence minor evils magnified themselves into various consequences, so that there has been a re-adjustment period during which he has been concentrating primarily on certain important matters of technique.

Now that this readjustment period is drawing to a close, at Mr. Edison's request, you, Charles and myself should at all times keep him thoroughly advised on all matters of technique. That we have not completely done so for the past four years is in part excusable, but certainly no excuse can exist for not doing so hereafter.

This memorandum is merely in the nature of a confirmation of the discussions which we have had with one another along this general line.

Managers

BATTERY-
STORAGE
Wireless Cell
10.2.20

Mr. Kellam
and company has donated
the following work to done

Experiments to design
and storage battery cell
for wireless service

Will you please have a
list of orders received and
amount received

W. H. Kellam

FUNCTION Edison Stora, Battery Co. & Subsidiaries
 FROM Arthur Mudd, Secretary
 TO Charles Edison, Chairman Board of Directors
 SUBJECT Annual Meeting

FINANCIAL MEMORANDUM NO. 636
 DATE October 13, 1920
 EFFECTIVE

Dear Mr. Edison:

In accordance with our by-laws the annual meeting of the stockholders, for the purpose of electing Directors receiving annual reports and for such other business as may come before the meeting, will be held-

Battery Company	Nov. 3, 1920
Supply Company	Nov. 10, 1920
Garage	Nov. 17, 1920

At the present time there is a vacancy in the Board of Directors of each of the corporations. The Directorate at present is

Battery Co.	Supply Co.	Garage
Thomas A. Edison	Thos. A. Edison	Thos. A. Edison
Charles Edison	Charles Edison	Charles Edison
S. B. Lambert	S. B. Lambert	S. B. Lambert
H. F. Miller	H. F. Miller	H. F. Miller
(Vacancy)	(Vacancy)	(Vacancy)
J. V. Miller		
T. I. Crane		

As explained to Mr. Lambert, in sending out the notices for the annual meeting it is desirable to state the number of Directors to be elected.

Should it be desired to change the number of Directors, this can be accomplished by amending the by-laws either at the stockholders meeting or at a Directors meeting held previous or subsequent to the annual meeting, previous being more desirable inasmuch as at the stockholders meeting a resolution is usually adopted ratifying, affirming and approving the acts of the Directors during the previous year.

Will you please discuss this matter with Mr. Lambert at your convenience?

Mudd

TO Edison Storage Battery Company

FROM Arthur Mudd, Secretary

TO F. D. Fagan, Vice President & Financial Executive

SUBJECT: Deferred Payment and Rental Plans

FINANCIAL MEMORANDUM NO. B 661
DATE October 22, 1920
EFFECTIVE

Dear Mr. Fagan:

I quote below excerpts from minutes of meetings of Board of Directors concerning Deferred Payment and Rental Plans for sale of batteries, regarding which Mr. Lambert informs me he has already spoken to you.

July 8, 1919

The Vice President and General Sales Manager presented and recommended for adoption a proposition for the sale of Edison storage batteries under a deferred payment plan, a copy of which was ordered inserted in the minute book for the purpose of reference.

RESOLVED that the deferred payment plan for the sale of Edison storage batteries, presented at this meeting by Mr. C. E. Sholes Vice President and General Sales Manager, be and the same is hereby approved and adopted and that the Vice President and General Sales Manager be and he is hereby authorized to place the same in operation at once, provided, however, that for the present the total of the deferred payments thereunder shall be limited to \$250,000.00.

July 7, 1919

From - C. E. Sholes, V.P. & G.S.M.
To - Charles Edison, Chairman
Board of Directors.

To meet competition and the new renting plan offered by some lead battery makers and to help overcome the wide difference between their selling prices and our own, it is respectfully recommended

1. That your Selling Division be permitted to offer a Deferred Payment, or installment, Plan under which Edison batteries may be purchased at only list prices therefor.
2. That the plan include a contract, a cash payment of 15% and 5 Acceptances for equal amounts at 4 - 6 - 12 - 16 - 20 months respectively with interest at 6% per annum.
3. That the plan be only offered to individuals or concerns who have good reputations or can furnish reasonable references for integrity and honest and honorable fulfillments of obligations.

4. That no written guarantees by this Company shall be furnished with installment agreements, but that we will feel morally bound to attend same as under written guarantees.

To help toward your consideration we attach a suggestion of forms which might possibly be used if approved by Legal and Treasurer's Department, and also mention that the plan need not include any unreasonable business risk; that the acceptances with contracts could undoubtedly be discounted for part of their periods or used as collateral, if desired; and that it would perhaps be an especial advantage if we could offer this plan coincident with our new prices.

Respectfully submitted,

C. W. Sholes

October 2nd, 1919

DEFERRED PAYMENT PLAN SALES

In the matter of the Deferred Payment Plan adopted at a meeting of the Board held July 8, 1919, the Vice President and General Manager presented a recommendation from the Sales Committee to wit:

That manufacturers may use our Deferred Payment Plan to promote the sale of Edison storage batteries and receive on such sales a discount from list price of 15% on "A" type and 10% on "G" type batteries, but provided:

1. That this discount applies only to batteries sold by manufacturers for new vehicles.
2. That trade acceptances in payment shall cover list price with interest.
3. That trade acceptances shall be endorsed by manufacturer who sells vehicle.
4. That manufacturer shall give not less than 5% of the list price to the agent or distributor who makes the actual sale.

AND FURTHER: that when our Deferred Payment Plan is used in the sale of Edison batteries to replace lead, the policies covering discounts for the removal of lead batteries by Edison shall apply on all such sales provided, however, that the Deferred Payment Plan shall be used only when necessary.

October 9, 1919

In the matter of the use of the Deferred payment Plan in connection with the sales of batteries to manufacturers and to replace lead, the Vice President and General Manager stated that the Sales Committee are of the opinion that we cannot dictate to the manufacturers what they shall allow their agents or distributors and recommend that that portion of the resolution adopted at the meeting of the Board held October 2nd, which requires the manufacturer to give not less than 5% of the list price to the agent or distributor making the same, be rescinded.

RESOLVED that provision #4 in connection with the use of the Deferred Dividend Plan by manufacturers, be rescinded.

manufacturers, adopted at meeting of the Board held Oct. 2, 1919, and reading as follows:

"That manufacturer shall give not less than 5% of the list price to the agent or distributor who makes the actual sale"

be and the same is hereby rescinded.

Dec. 26, 1919

DEFERRED PAYMENT PLAN

In the matter of the sale of Edison Storage batteries under a Deferred Payment Plan, approved at a meeting of the Board on July 3, 1919, which said plan was subsequently amended at a meeting of the Board on Oct. 2, 1919, to permit its use in connection with the sale of batteries to manufacturers, the General Manager presented and read a memorandum dated Dec. 17, 1919, embodying a recommendation that the Sales Department be permitted to use the Deferred Payment Plan, without any unreasonable restriction and within the \$250,000. limit previously prescribed, and stated that said proposition meets with the approval of the President.

RESOLVED that the Deferred Payment Plan authorized for the sale of Edison storage batteries to consumers and manufacturers, be and the same is hereby amended to permit its use without any unreasonable restriction, in the sales of Edison storage batteries to all classes of customers, provided, however, that the total of the deferred payments thereunder shall be limited to \$250,000.00.

June 17, 1920

RENTAL PLAN

The Vice President and General Manager presented communication from Sales Committee recommending that, in order to meet serious competition from rental plans in various cities, the Sales Department be authorized to inaugurate a rental plan in New York, Boston and Chicago, which plan shall apply only at list prices and shall require not less than 20% down and balance in forty-eight equal monthly installments, and provide that at the end of the rental period, when all rentals are fully paid, the battery shall become the property of the lessee; it being further understood that this plan shall be offered on new sales and replacements of lead batteries in street vehicles and not for any other application.

RESOLVED that the plan presented at this meeting for the renting of Edison storage batteries on a rental basis, be and the same is hereby approved and adopted, and that the General Manager be and he hereby is authorized to place the same in operation for one year, provided, however that the net invest-

- 4 -

Mont represented by batteries in the
hands of customers shall not at any
time exceed \$250,000.

-000-

Muz ✓

Butler, Stange

October 22, 1920.

Mr. H. A. E. Andreassen,
Plating Department,
Disc Re-Creation Div.,
Grange, N.J.

Dear Sir:-

You have used such poor judgment in trying to hire one of my inspectors away and offering higher salary, that in my opinion you will not be able in the future to manage the plant satisfactory to me.

Therefore, I accept your resignation to take place at once, but I will pay your salary for November.

Yours truly,

Enclosure - Check.

[ATTACHMENT]

Anderson -

You have used such poor judgement in trying to hire one of my inspectors away & offering higher salary that in my opinion you will not be able in the future to manage the plant satisfactory to me. Therefore I accept your resignation to take place at once, but I will pay your salary for November

Tracy

New York University
DEPARTMENT OF MECHANICAL ENGINEERING

**BATTERY
STORAGE**

COLLINS P. BLISS, Professor of Mechanical Engineering
CHAS. E. HOUGHTON, Professor of Mechanics and Thermodynamics
WM. R. BRYAN, Associate Professor of Engineering Drawing
HATZEN G. TYLER, Assistant Professor of Mechanical Engineering
HEBER DUNHAM, Assistant Professor of Engineering Drawing
WM. K. SCHUYLER, Superintendent of Shops

UNIVERSITY HEIGHTS
NEW YORK CITY

October 25, 1926

*Mr. Muelbaurgt -
How does Mr. Edison
handle these?*

Mr. Charles Poyer,
Edison Industries,
Orange, New Jersey.

My dear Mr. Poyer:

Mr. Outwater, who has been one of our students, said that he had spoken to you about the splendid help we have been receiving from the large industries all over the country regarding donations in our new research laboratory.

I might say in this connection that one half of the bequest of Mrs. Russell Sage to the University has been given to our School of Engineering for the purpose of erecting the first building we have ever had in our new engineering group. This was done with the understanding that we would interest the large industries of the country in helping us out with donations of equipment. We have had a splendid response and have, up to date, secured equipment to the value of very nearly two hundred thousand dollars. There is a small item of equipment which your interest could give us and which we would greatly appreciate, namely:

24 storage cells type A4 or A4H - 150 Amp-hours with connectors.

It would give me great pleasure to drop out and see you at any time if you feel that this request would be favorably considered, which I certainly trust it may..

Believe me,

Very cordially yours,

CPB/DA

Collins P. Bliss

*Chas. Poyer -
Pls note & arrange things
with them - W.*

*Charles - I sometimes
feel that this pays us
in the long run & that
we should do it -
Think what it does for
us with so much trouble
that if they get
what they want
we want ours*

Edison

*I think so in many cases but not all -
In this case I think it would do us good but
believe they would be content with smaller cells
Shall I see them? ? Yes - W*

FUNCTION ☒ Storage Matter

FINANCIAL MEMORANDUM NO. 7074

DATE October 29, 1920

OBJECTIVE Date of Issue

FROM Vice President and Financial Executive.

TO ☒ Mr. Frank D. Fagan, Vice President & General Manager for Mr. J. V. Miller, Vice President & General Manager Edison Chemical Works.

SUBJECT ☒ Nickel.

Dear Mr. Fagan:

Mr. Edison, after his recent trip of inspection through the Chemical Works, feels that we have fifty (50) tons of nickel tied up in by-products, all of which could easily be used.

If there is anything that you can do to assist Mr. Edison in the recovery of these by-products I would personally appreciate the conversion of the money represented therein into actual working capital, which we so much need.

Mr. Mudd:

I am sending you copy of this memorandum with the understanding that you will advise me of any progress or lack of progress being made along this line. Under no circumstances, close this memorandum in your follow-up files until the matter has been satisfactorily handled, explained or disposed of and I authorize you in writing to cancel same.

November 25, 1920.

Mr. Edison:

You wanted to check up on the work for repairs in the Plating Dept. two weeks back.

Nov. 9th, Folsom reported	42 items -	November 23d	Folsom	639 items
Nov. 9th, Ordway	" 22 "	" "	Ordway	30 "
Nov. 10th Folsom	" 42 "	" "	24th Folsom	34 "
Nov. 10th Ordway	" 26 "	" "	24th Field	11 "
Nov. 11th Folsom	" 44 "	" "	25th Folsom	46
" 11th Ordway	" 29 "	Day and Night	" }	

* Note: While 39 items may be reported these are of minor consequence, mostly loose belts - no serious repairs.

I have been wanting to talk to you for the last ten days about the Plating Dept. Inspectors. Folsom feels that the houses are now in such shape that he has not enough to do. This morning he made three trips through all the houses and says there was very little for attention. He has felt the same way about the Night Inspection.

Now that Ordway is going, think Folsom can run both the Day and Night shift. I have spoken to him and he says nothing would suit him better. He says he would come in about 6 or 7 hours during the day, and put in 4 hours at night, sometimes getting up about 3 or 4 o'clock in the morning, when the men least expect him. He is very conscientious and appreciates what it means to be an "Inspector" for you.

I don't know what you intend to do, but thought to write the above at any rate.

Folsom's salary at present is \$35 with \$5.83 when working Sundays, making his net salary for 7 days \$40.83.

Tell Folsom if he can get a ^{ALTERNATE} ~~Evening~~ ^{Shift} with the job - to go ahead + I will raise his basis to 40 per week + same basis for Sunday - Have Card made out for same sign

Sent new card to Mr. Schultz. Recd. Dec 14/20 Haa

[ATTACHMENT]

Mr. Edison -

On the basis of
\$40⁰⁰ a week for Folson,
he would make, working
Sunday \$46.66²/₃. As
he would come in again Sunday
night, his net pay
would be \$53.33¹/₃ - \$5⁵⁰/₁₀₀
Old way - 52 night - \$75.83

Meads Craft

Discharge Kennedy

Mr. Tolson

Edison

On the night Nov. 25. Inspector Kennedy came in here this morning at 3:15 a.m. and went upstairs. at 3:55 a.m. I went up to see what he was doing. He told me he could do as he damned pleased and tried to start a fight. I find this man sleeping nearly every night he is on duty in the garage. This is not right and what you would see if something could be done about it.

Joe Phillips

Night Watchman

Mr. Meadscraft -

above for your information. was given to me Saturday night.

Falsom

Mr. Edison said to
to pay him to
the end of the
week. WMM

11/30/00

Willingboro File —
11-27-20.

Mr. Meadowcroft. —

Replying to your question about Mr. Kennedy, we say that I base my opinion of his work on the following:

1. His being mixed up in the rocks in the garage the evening of the 19th when he was not on duty.
2. Three days later - Tuesday 23rd, I came in at 8:44 a.m. and found Mr. Kennedy leaning back in chair against wall in corner of garage, apparently asleep. On this night he did not come in to work until after 2 a.m. as shown by his card. When I came in he remarked that he had not been to bed for over 24 hrs.
3. His apparent lack of interest in his work at all times.

Falsom

Nov. 30 - 1920.

Mr. Edison: -

Please accept
my resignation to take
effect immediately.

C. F. Kennedy.

3 Copies

Murd
file

December 16, 1920

FROM: Frank D. Pagan, Vice Pres. & Gen. Mgr.
TO: Messrs. Charles Edison and S.S. Washburn.
SUBJECT: Replacement of Edison Storage Batteries.

There seems to have been no definite standard as to the basis on which we will make replacements under our guarantee. The following is an outline of a new policy proposed by a committee consisting of the managers of the various divisions of the Sales Department, and on which I am asking your approval and comments:-

- (a) Replacements made to customers on batteries should be based upon the particular guarantee which was signed by the customer at the time the purchase was made.
- (b) Customers who did not sign any guarantee agreement at the time of purchase and who may ask for replacement, shall have their replacement made on the basis of the particular guarantee which was in effect at the time the purchase was made.
- (c) Replacements on all batteries purchased prior to February 7th, 1917, will be made according to present ten-year scale, basing allowance on price-list in effect at date of purchase of original battery to apply against list price in effect at date of replacement.
- (d) On renewal of replacement batteries not covered by ten-year guarantees, the price should be list price in effect at date of replacement, less a discount of 25% on A and B types and 20% on C types, and the return of the old battery.

You will note from the last paragraph that we propose a definite price for replacement of batteries which have already been renewed, known as renewal of renewal. In the past, it has been the policy to apply the guarantee to these batteries, which means that we have been giving too much to our customers. The result is that our replacement "profits" have been red.

Your approval on the above is requested as soon as possible.

APPROVED *Arthur Murd*

Frank D. Pagan

APPROVED *Charles B. Washburn*

Frank D. Pagan

APPROVED *E*

APPROVED *JaE*

Rhous Town

That there is a good place
at Singas near bridge crossing
Jamaica River on Pompton road
thick brick walls, steel
trussed roof - about 35 ft
wide, 100 to 115 ft long
in good condition, ~~one~~
1 story - Owned by
Public Service Co. Set up
for sale. Think they will
rent, its rented now but
think man only rents by
month. Truck in front of
door, 20 men inside from
orange - 2

20 x 28"

Box 225 pieces

5.84 - 100 lbs - Amsteel C&S

Meadcraft

Storage Battery 6000

5.84 - 100 lbs - Amsteel C&S

38 gauge 11.5

00625

Find out the thinnest
Black plate, (Iron) Rolled
for tinning - I do not
want the tinned plates
but plates before
tinning - get price
through U.S. Steel
Sheet & Tin Plate Co 8990 Corp
largest These black
plates are quoted daily
in Comel sheet 600 910 2
no sizes

Black Iron Plate - annealed;
Cold rolled and re-annealed.
for Tanning.

Thinnest #38 gauge U.S. .00625

Size 20 x 28"

Price today (if they had any)

would be \$5.84 per 100-lbs

Can load lots.

Will not have any more
this year.

#37 - .0066

36 - .007

35 - .0078

34 - .0085

725.25 .020 - 20 x 28"

Tin plate black

1 Box 56 plates in stock here

Dickenson & Van Dusen

24 - .025 20 x 28"

~~29 Bundles~~

63 Boxes of 56 sheets

\$5.84 per 100

Bruce & Cook - 6270 John

Merchants & Evans 4390 Beekman

Republic Metal Ware Co Brooklyn
Sims 5406

Bruce & Cook

New York

Black PC

#34^{.0085} 20 x 28 - \$15 box
150 sheets
#36^{.007} 20 x 28 - 15.25 box
180 sheets

Jagger's Iron

Charles

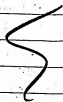
3rd Request —

Last night all lights went out
for 20 minutes — Public Service I
understand —

I have twice before requested that
2 lights be put on each
floor of all buildings with
small wire separate pkt.
so each bldg could turn it
on in emergency — using old
set of 6 Bat Cells which will
last for years, The whole
dis. plant would only need
16 light or 1 Horse Power
+ so on — nothing
appears to have been

2

done about this allhance
2 Requests are over
year old — Cost is
practically nothing
If this is to be done
let person who will
do it see me —



Mr. Edison:

I received from Butler
the Geological Survey
Bulletin on Mineral Springs.

I see that what you
say is true. There is a trace
of lithia in many springs.
The New Britain spring at
Saratoga shows as high as
9.83 grains lithium bicarbonate
to the gallon.

Meadowcroft

Mr. Edison:

Geo. Drake Smith
of Storage Battery Co.,
recently saw W.H. Atkins
and E.W. Mansfield of
Boston Edison Co.

They had heard of
your photograph record,
and wished very much to
have one. They did not
seem to know they were for
sale. Don't you want to
send one to each?

Drake Smith says he
thinks it would help along.
Meadowcroft

Knierim
Lieb told me he
Mr Edison had tuberculosis

Knierim was in here
today to take away his trunk
and personal effects.

He has a very bad
cough and has been spitting
blood, Lieb had the Company
doctor see him and make an
examination. The doctor told
him he ought to go away
and recommended that he go
in the pines at Asheville, N. C.
and he would probably be
all right in a month or two.

2
The New York Edison Co. will
continue his salary. I told
Knierim that I guessed you
would probably have to drop
him from your pay roll as
the Government work is
nearly ended. He said he
had rather expected that. I
suppose that is OK.

Poor old Knierim, I
am sadly afraid his lungs
are affected!

McAndrews

**Edison Storage Battery Company Records
Correspondence (1921-1931)**

This folder contains documents, primarily correspondence, relating to the business of ESBCo. The documents cover the period from 1921 until after Edison's death, but the bulk of the material is from 1921-1924. Included are letters pertaining to the sale of Edison storage batteries, the real estate and capital of the company, and the processes of production, accountancy, and administration. Correspondents include Edison, Charles Edison, H. A. Altengarten, Frank D. Fagan, Stephen B. Mambert, Arthur Mudd, C. E. Sholes, and other ESBCo employees. Some of the items relate to sales agents Maurice E. Fox and John F. Monnot, to the Edison Storage Battery Supply Co.'s contract with the American Railway Express Co., to royalties collected from the Deutsche Edison-Accumulatoren Co., and to service guarantees granted to ESBCo customers. There are also memoranda concerning employees under Edison's direction and relations between ESBCo and the phonograph and primary battery divisions of Thomas A. Edison, Inc. Related material can be found in the Plant Operations and Research Records.

Less than 10 percent of the documents have been selected. The items not selected include routine exchanges dealing with the supply of equipment and material for ESBCo and with matters of daily administration and accountancy. Also not selected are letters of transmittal and acknowledgment and items that duplicate information in selected material.

Battery, Storage, 18 / 21

Mr. Edison - Attleborough \$40-Neill
What is Neill's Salary \$30-Caldwell

Altho I appreciate fully the present
business conditions, I feel that in justice to
myself I should remind you of my personal affairs.

When I first came here (five months ago)
I accepted a rate much lower than paid to others
of similar training & experience with the
understanding that it was purely temporary.

I have not mentioned salary since as I have
looked rather toward the job than the money, but
in view of the fact that I have not only to support
myself but to contribute toward the support of my mother
you can appreciate that I can hardly be content
on \$30.00 per week.

If I did not feel that this salary was much
lower than normal reduced rates considered - I would
not bother you at this time, but as it is I feel
justified in asking for consideration.

Respectfully,
R. H. Caldwell

FUNCTION

Export Division of E. S. B. Co.

FINANCIAL MEMORANDUM NO. B. 52

DATE February 8, 1921:

OBJECTIVE

FROM

Fred C. Erwin, Ass't Secretary

TO

Stephen B. Lambert, Vice President and Financial Executive.

SUBJECT

Sale of "Export Division to Thomas A. Edison, Inc.

At a meeting of the Board of Directors of Edison Storage Battery Company, held Tuesday, February 8, 1921, at the principal office of the Corporation, West Orange, N. J., the following resolution was adopted:

RESOLVED, that the proper officers of this Corporation be and they hereby are authorized to sell that portion of its business known as "Export Division" to Thomas A. Edison, Incorporated, at its net worth as shown by the books of account at the close of business on the evening of December 31, 1920, in accordance with the following statement of assets and liabilities.

Assets:

Cash On Hand	\$ 300.00
Accts Receivable-Customers	78,940.21
Res. for Doubtful Accts \$1,199.54	
Less Accts written off	541.77
Due from T. A. Edison, Personal	6,047.40
Finished Merchandise	15,608.26
Consignments at cost	795.08
	\$98,653.12

Liabilities:

Accts Payable-Outside Vendors	\$ 319.02
Accts Rec. Credits-Customers	8,406.48
Thomas A. Edison, Inc.	1,249.06
Edison Storage Battery Company	54,756.56
Net Total	44,728.01
	\$83,904.21

I hereby certify that the foregoing is a full, true and correct copy of the resolution as it appears in the Minute Book of the Export Division.

Fred C. Erwin
Assistant Secretary.



(1749-2)

FUNCTION Storage Batt /

FROM Stephen E. Hammett

TO Executive Committee

FINANCIAL MEMORANDUM NO. 11377

DATE March 24, 1921

EFFECTIVE Date of issue

SUBJECT Our relative of Direct Costs and Fixed Burden to our Selling & Credit Policies.

--- Thoughts ---

In our business, an A-4 Cell which is listed at \$20. is usually sold at 25% off of list, that is - at \$15.00. Generally speaking, at the present time, we can replace any Cell which we ship from stock for \$7.50, made up of approximately -

\$4.00 which we would have to pay out for direct purchase of material;
 1.50 which we would have to pay out for indirect labor;
 2.00 for direct expense;

In other words, it will be seen that if we obtain \$15.00 for an A-4 Cell, and our direct cost of assembling same is \$7.50, that for every A-4 Cell which we produce for a direct cost of \$7.50 and ship at a billing price of \$15.00, we earn \$7.50 applicable to the meeting of our fixed burden.

Now, what is our fixed burden? In round figures, our fixed burden is about \$7,500. per day. To have see that on this basis, it is necessary for us to sell a thousand cells a day to earn enough gross margin between our billing price and direct costs to compensate us for our fixed burden.

There is another way of expressing this. That is, for every cell less than one thousand cells a day that we ship, we lose \$7.50; for every cell more than a thousand cells a day, we gain \$7.50.

I hope that no member of the Executive Committee will try to tie me down too closely to these figures, because they are more or less taken from the air as reduction in costs of materials, direct labor and direct expense, as well as an curtailment of our fixed burdens, are in process of taking place, and, the above figures are obtained by sort of jumping out ahead of the actual closing of our books - more to express a principle than to get right down to the absolute penny or the absolute dollar.

How does this affect our merchandising policy? Just at the present time, it probably does not affect it one way or another. In other words, if we could sell all of our batteries at \$7.50 instead of

\$15.00, it probably would not result in the sale of one additional battery, but it does mean this: That just as long as we fail to sell less than a thousand cells a day on our present direct cost and fixed burden basis, we are in a bad way, and that just as soon as we can get to the point where we are selling more than a thousand cells a day on the present direct cost and fixed burden basis, we will be improving our cash position. In other words, a thousand cells a day is absolutely the minimum bogie which we dare work to on our present direct cost and fixed burden basis, and, if after the passing of such time as in the opinion of the Executive Committee may be reasonable, we do not succeed in arriving at a business of a thousand cells a day, it is going to be necessary to absolutely cut over what we now consider to be essentials, out of our daily fixed burden.

--- 33a ---

How does this affect our attitude toward the prospective customer who believes in Edison Batteries, who wishes to buy Edison Batteries, but is short of cash, and because of the fact that he is short of cash, is loath to buy our competitors' batteries costing only one-half as much as our own, although he realizes that the purchase of our battery, will prove more economical in the long run.

Obviously, if we obtain from such a man a cash payment of \$7.50, we are better off than if we lose the sale, even though at the particular time he makes the purchase, we have received no payment from him applicable to our fixed burden. After we have obtained the advantage of a wider distribution of our product, whatever payments we are successful in obtaining on the balance, whether over a short or long period of time, will immediately become of assistance to us in meeting our fixed burden, as such payments are made by this customer from time to time.

Wherefore, as the demand for large Battery equipment gradually returns, I want to be very certain that the business is not permitted to slip from our hands because of the large down payment that is double the amount required by our competitors, which we have been lagging during the months when the demand for our product exceeded our capacity to produce.

Everything which I have said during the months when we were unable to produce cells to meet the demand of our customers who were willing to pay cash, is now null and void.

We are in a different phase of the economic cycle and our financial policy is absolutely reversed in connection with same. I fear in mind that I am not in any way undertaking to reverse any of the Selling Department's sales policies, but I immediately wish to make certain that possible business is not lost or sacrificed because of anything which I have said during the preceding phase of the economic cycle, and that it is understood that I want all cases considered from the above angle. I would like to request that until such time as I become satisfied that my thoughts along the above line are thoroughly understood, that all questions of long time payment be brought to my personal attention, as I do not consider it a function of the Credit Department to make any exceptions to our regular terms of payment, or to apply a policy such as I have outlined above.

I am fully aware of the dangers of this policy and if it were not for the fact that I have confidence in Messrs. Pagen and Blair and the selling organization which they are building, I would never dare to lay myself open to the risks of entering upon this policy. It is because of this confidence that I am willing so to do, but at the same time, I wish to know every move that is made in this dangerous game.

In plain English: We have a product which must be merchandised. When we, the Edison organization, go into the market to buy equipment, we buy so just as long terms as we can secure, and we cannot expect to secure the maximum volume of equipment business unless we do exactly what every other concern in the equipment business has been doing, is doing, and always will do, namely - display a willingness to go half way toward meeting the customer's financial problem at the time he displays a willingness to install what is bound to prove to be the best in the long run.

Obviously no grant more as possible must be exercised in the application of this policy. It would be folly to issue a General Bulletin dealing with so confidential a subject, and, the control of our sales organization must be sufficiently direct so that this policy can be applied with intelligence from the customers and not generally mis-applied by the rank and file of the organization.

I believe that the ultimate success of this Storage Battery business lies not in lowering the price but rather in merchandising our product on a high-priced basis along the above lines in such way as to build up the largest possible volume of business. In this manner do I believe that we can cash in on the fact that our battery is the best in the long run without unduly burdening the customer with a first cost far above his financial capacity.

I consider this memorandum highly confidential, only for the knowledge of the Executive Committee. If there be any phase of this matter which does not meet with the unanimous approval of the Executive Committee, I would like to have it settled as soon as possible, because I am already working along this line in a few isolated cases and do not wish to extend this policy if there is any question as to its efficacy.

7/1

April 8, 1921

Mr. Edison:-

Have authorized Monahan and Smith to go ahead with tools for Audion Cell. This cell looks good to me. On account of Government red tape and requirements, we cannot until further approval from the Government ship the new cell, as its dimensions are different than the one they have approved. Am taking up with the Government today the question of supplying this new cell and hope to get their approval. They may insist upon a test which will take two or three months. In the meantime, we will go ahead and put it on the market to sell to amateur radio operators and others, as we do not need this Government order before we start manufacturing for regular sale.

We are under contract to supply the Government with a cell which meets with their approval. Otherwise, I am not much concerned about the Government business on this cell.

Frank D. Fagan

C.C. to Mr. Lambert

*Allegations
Present him to*

April 26, 1921.

Mr. Edison:

Baylow Edison

My resignation is yours for the asking, of course, but I want you to know these facts.

I have never been any good at tricky diplomacy. My policy has always been to think straight, work hard, and speak the truth.

Whoever said that I was blowing about my raise is a damn liar.

The only thing resembling blowing which I did was to tell a very few of my personal friends that I had received a raise and that I did not think that I deserved it. If that constitutes blowing, then I stand convicted.

Not being a diplomat, I did not think it necessary to keep such a thing secret from personal friends. It was a surprise to me the way the news spread.

The history of the whole mess is as follows:

Monday afternoon I asked Mr. Altengarten whether certain ideas I had been working on should be submitted to you or to Mr. Hemphill. Within half an hour Mr. Hemphill had heard about it and phoned me that I was out of his department.

When asked for an explanation, Mr. Hemphill said that he didn't want Altengarten sticking his nose in the production department and that he didn't want anybody in the department going to you with any suggestions. He apparently thought that I was trying to put something over on him. In this he jumped at a wrong conclusion.

Since when has it become a crime for an inspector to think of submitting a memorandum to you?

I have been told that when Mr. Hemphill heard of my raise he went up in the air and practically said that he was going to get me if he could. Apparently he has succeeded.

As to men being dissatisfied, I am sure that letting a deal like this be put over will do more to lower the morale of the inspectors than any indiscreet talk of mine.

I may have been indiscreet but I'll be damned if I did any blowing. Ask any of the inspectors to whom I mentioned my raise.

I hope I have convinced you that I was doing my best to play the game square. If so, and if you think my brains are worth something, is it fair to let me out because of a silly mess like this?

Might it be possible to straighten matters out by shifting me to the sales department? I know more about advertising than manufacturing anyway.

Respectfully,

A.H. Townsend

June 10, 1921

Mr. Thomas A. Edison:-

I am attaching a few reprints of newspaper clippings from Canada. These cover a story of a trial trip of a battery car, the test being run under the supervision of the Railway Storage Battery Car Company on the Canadian National Railways tracks. Publicity was given to this test throughout Canada.

Pathé Weekly News and another News Weekly have distributed moving pictures of this trial to over four hundred theatres in Canada. We will get a copy of this film and show it to you next week. It takes about three minutes to run.

We are co-operating with the Railway Storage Battery Car Company in every way possible to develop this business, as it is purely Edison and each order is a big installation. The list price for one car equipment is \$14,000. As far as I can see, this business has been neglected in the past.

✓ Frank D. Fagan

CC to Messrs. Chas. Edison
and Mansuet



1. ISON STORAGE BATTERY COM. NY

ORANGE, N. J.

June 28, 1921.

Personal

Personally addressed to Department heads at Orange and Silver Lake.

You have been advised of the temporary reduction in salaries of one-half day, weekly. I wish to take this opportunity of expressing to you my personal appreciation of the spirit in which you have received this reduction.

There never has been a time in the history of the country when alike co-operation and concerted action on the part of every man was more necessary to bring about a better condition than at present. Due to the unsettled conditions in foreign countries there is little or no export business, and this has a direct reflection on the business of this country. In your contact with other people, I would like to suggest that you talk optimism. To best give the very best service possible on orders from our customers, and the Sales Department will concentrate on the securing of all possible available new business.

It is hoped that the present situation will improve within a short time, and I trust that you will use your best efforts in helping us wherever you can to bring about this improvement.

Yours very truly,

Frank D. Pagan.

Copies to Messrs. Charles Edison and S.B. Nashbert.



Allen Garten - Will be at Lab
on 9th I want Bradshaw 1921
Mr. Edison:- put him on list - Σ
On ~~our~~ ^{our} re-organization.
plan am going to try and handle
both Baines (clipping school) and Bradshaw
(Prod. School) work, realize it is a big
undertaking, but will do my best
and if I get in wrong can get
one back.

You can therefore have
Bradshaw.

Will release him here
July 8th, so you can have him
to start on July 11th.

Lamb.

7/13/21

Mr. Edison - Allenquisten 20 OK

+ see he gets money - say cant promise
job when he gets back his personality

^{would be better way possible}
negotiation with T. A. Edison and, effective

to Los Angeles
Saturday July 16. An opportunity has
just been offered me to work my ^{self} on
a three month trip to Europe on an oil tanker,
sailing from New York next Sunday morning.

I am now anxious to take advantage of this
opportunity, feeling that my departure should
have no great inconvenience to the company as
my present work is practically only a duplication
of Mr. Null's.

If permission is granted me to leave
Saturday I would like authority to collect
wages due me at that time.

I would also like an expression of
opinion as to the possibility of my being
delayed on my return to this country.

C. Wagner

Mr. Edison - ~~This is one of the~~ July 27, 1921.
~~troubles - it is a rough guess~~
~~I have an opportunity to get~~

back into the Foreign Trade line by going
into the Latin American Division of the
Bureau of Foreign & Domestic Commerce, ^{in Washington}
and so I am leaving your employ.

I am sorry that you are not here
so that I could say good bye to you
personally. I have learned a good deal
about human nature since working here
and I believe that although it is a far
cry from testing records for Wallenstein's
department to writing reports on the
demand for chewing gum in the
Andes near the base I have profited
by my experience under your
direction.

Ever since I was 13 years old I
have been deeply interested, almost
to the exclusion of everything else, in
Latin American affairs. I believe
that you will appreciate my interest
in one particular line of work and
my desire to stick to it.

With best wishes for your personal
health and success and with thanks
for your having taught me a few
things,

I am

Yours Very Sincerely
Ralph L. Hounshay

BATTERY-
STORAGE

August 9th, 1921.

Mr. Edison:

Would it not be a good plan to instruct heads of departments to whom Inspectors' reports are sent to come back to me on items calling for attention?

Although this would increase our work here considerably, both Mr. Starrett and myself feel that this system would result in more attention being paid to these items, and result in a considerable saving of money and time. At present many of these items seem to be lost sight of, and finally forgotten. They should not have to wait until the inspector reports them several times.

H. ALTINGER

KAG

These items will not be lost if you do as I asked you yesterday to notify all inspectors to keep repeating the defects numbering them & put in each days report. This will get on the nerves of person responsible & also keep us posted. E

I will see him -
S

E.S.R.
Aug. 11/74
6.30 P.m.
(4-12 Midnight Shift)

Mr. H.A. Altengarten -

Dear Sir,

The writer wants an interview with you tomorrow at 2:30 P.m. (Aug 12th).

Mr. Egerton has notified the writer verbally, that its near time for Frank Powers to "git".

Mr. Egerton and writer hasn't been pulling together as well as they should. He states his confidence in F.P. is negative, so there you are.

The writer wants to remain with T.A.E. in some capacity or other.

A good frank talk may clarify this situation.

Trusting we can find a way out which will not cost the writer his job.

Very Truly
Frank Powers

Sept 7, 1921.

Mr Edison:-

Since I came to work for you last February I have had five or six assignments, all of which I have carried out to the best of my ability.

Yesterday Mr. Altinger brought me word that I was to replace Mr. Hopkins as Ponder Blank Inspector. I have made several trips of inspection with the latter thru the Ponder Blank, and am convinced that it will be physically impossible for me to do this work, as I am a sufferer from hay fever and find the dust of the blanks very irritating.

I am accordingly obliged to ask you to assign me to some other work, and trust you will be able to do this without serious inconvenience.

Put in E.P.M.

9/8/21

Hand

Sept. 14, 1921.

Mr. Edison:

As there seems to be no opening for me in the immediate future with this company I have decided to resign and will probably go to a university for advanced study this fall.

This resignation is effective on Saturday, September 17th.

Will you kindly give the necessary instructions so that I can receive my pay in full on Saturday.

P. R. Smith
P. R. Smith

Sent Return to Personnel 9/14/21
HAG

Return
9/15/21
HAG

Smith: It is usual with me that when a man wants to leave he gives a weeks notice to give me a chance to fill his place. - Can you find a fellow a few days & break another man in
E

September 20, 1921.

Mr. Pagan,-

Agreement dated July 1, 1920

I have gone over the contracts with the American Railway Express Co. handed to me by Mr. Veale and find the situation to be as follows:

On April 17, 1917 The Edison Storage Battery Supply Co. wrote to the American Express, offering to supply batteries at certain prices. This offer was accepted April 25, 1917. After five years, replacement allowances were to be as follows:

A's	replaced by A's	50%
A's	" " G's	40%
G's	" " G's	40%

There was a special arrangement as to batteries requiring replacement during the five-year period. This contract was cancelled to take effect July 1, 1918. These replacement allowances would apply to all batteries supplied under this agreement.

By correspondence extending from Aug. 6 to Aug. 15, 1918 an agreement as to prices, etc. was then made between Edison Storage Battery Co. and American Railway Express Co. Under this agreement the discounts were to be 30% on A and 25% on G type cells. Replacement allowances were to be according to the 10 year schedule contained in our printed guaranty, ranging from 100% to 30%. This arrangement, with an increase in list prices on August 1, 1919, continued in effect until modified by Mr. John Kelly's letters of Sept. 6th and 11th. The effect of these letters was to make the replacement allowances for the first three years, or for the first 2-3/4 years, according to the printed guaranty in effect.

at the time of shipment, and 50% thereafter. I interpret the modification to apply to batteries sold from and after Sept. 6th, 1919, because of the first sentence of the letter of Sept. 6th which reads:-

"We desire to confirm arrangement under which your Company will purchase Edison batteries from us" etc.

There was no acknowledgment of Kelly's letters of Sept. 6th and 11th, but orders were subsequently placed, which probably constitutes an acceptance. There may be some question as to Kelly's authority to modify the contract in this manner, but I believe the General Sales Manager would be presumed to have this authority, although it may be fairly argued that he did not have authority to obligate the Company for any period in excess of 10 years, as that is the maximum period of any of our authorized guarantees. Furthermore, Kelly signed the later contract under which we are now operating.

On July 1, 1920 a new agreement was made. While this agreement purported to supersede and annul prior agreements, there are references in it to replacements made or to be made under our service guaranty, and from this it is to be inferred that it was not intended to terminate our obligation. *with respect to batteries previously furnished* as to replacements. Furthermore, I understand replacement allowances have actually been made since July 1, 1920.

I doubt whether we could make out much of a case in any attempt to free ourselves from the obligations as to replacement allowances as set forth in the various contracts. However, the situation is complicated to such an

-3-

extent as to render it highly desirable, if possible,
to come to some definite agreement with the Express Co. as
to the rights of the parties.

Henry Lanahan

HL

HL-X

[ATTACHMENT]

Edison Storage Battery Co.

Orders Received --- Daily Average

July 5, 1921

Name of Customer	Quantity	Type	A-4 Equip.	List	Discount	Net
International Time Rec Co., Endicott, NY	10	BLH	1.25	65.00		65.00
American Ray Exp. NY	(A) 60	AB	120.	2380.00	25 PP	1825.00
Louisville & Nashville, RR., Louisville, KY	(B) 25	ASH	50.	962.50	22 PP	745.94
Powley & Townsley, Toronto, Can	4	G9	6.	142.00	15-5 PP	114.66
"	25	ASH	50.	962.50	20-5 PP	781.80
Mat'l Malleable Casting Co., St. Louis, Mo	1	AB	2.	36.00	0 PP	36.00
Manhagan S. J. Loco Co. St. Louis, Mo	84	A10	210.	4074.00	25 PP	3055.50
Manhagan City Power & Lgt Co., Kansas City, (XB)	64	AB	128.	2432.00	35 PP	1543.66
Michigan Transit Co., Chicago, Ill	(X) 94	B4H	47.	1151.50	0 PP	1151.50
Joe. M. Brown Co., Chicago, Ill.	(X) 1	AG	1.5	22.50	15 PP	25.07
	368		615.75	12137.00		8477.73

Approximate daily average A4 - 459
" " " 6 6612.

- (A) Replacement of 60 G11 cells
(B) " Edison
(X) Shipped from Chicago Stock

Mr. Edison - Fagan away today. His Office says American Ray Exp. contracts runs to July 1st and thereafter, until cancelled upon 30 days written notice. It has not yet been cancelled.

7/7/21

ALFRED ARDEN
100

Charles E
Why cant it be cancelled
we make a terrible
loss every time we
cancel

Fagan
Is it correct that our
Contract Expires with
Amount Exp in July
Edison

[ATTACHMENT]

Edison Storage Battery Co.

Orders Received - Daily Average

September 1st, 1921

Return to Allengarten

Name of Customer

		Quantity	Type	A-4 Unit	Net	Discount	Net
G.E. & Q. RR., Chicago, Ill.	(X) (A)	42	A6	65.	1239.00	25 P9	929.25
Central Scientific Co. "	(X)	12	B2	3.	102.00	20 P9	81.60
W. M. Welch Mfg Co. "	(X)	1	B2	.25	8.50	20 P9	6.80
Miami Univ., Oxford, Ohio	(X)	7	B2	1.75	59.50	10 P9	53.55
Smith-Mccker Mfg Co. NY		3	A4H	3.	61.50	25 P9	46.13
C. V. Hindle, Ossining, NY		12	B2	3.	102.00	20 P9	81.60
Safety Car Mt & Lf Co., New Haven Conn		25	A6H	36.	962.50	25 P9	721.75
Illinois Central RR. Chicago, Ill		24	A6HW	35.	750.00	20-5 P9	570.00
Los Angeles Auto Wks. Los Angeles, Cal.		120	A8	240.	4550.00	20 P9	3648.00
T.A.E. Export, NY		15	B4	7.50	176.25	25-5-10 P9	113.03
American Rwy Exp Co.	(A)	2	A8	4.	76.00	40 P9	45.60
"	(A)	1	G11	1.62	42.00	40 P9	25.20
"	(A)	1	A8	2.	38.00	40 P9	22.80
"	(A)	1	G11	1.62	42.00	40 P9	25.20
"	(A)	4	A8	8.	152.00	40 P9	91.20

270

424.74

5371.25

6471.74

(X) Shipped from Chicago Stock
(A) Replacement of Edison

Jaeger

*I was told Contract with Amer Exfo
would expire in July & we would
not get a price that would stop
our very severe losses - How about
this
Edison*

[ATTACHMENT]

Edison Storage Battery Company Battery Guaranty



GUARANTY NO. 276
SALES ORDER NO. _____
NUMBER OF CELLS _____ TYPE _____
DATE OF ORIGINAL SHIPMENT _____ 19____

To _____



As an assurance to you that the quality of durability possessed by the Edison Storage Battery shall inure to your benefit, we, the undersigned, EDISON STORAGE BATTERY COMPANY, hereby guarantee all the Type cells bearing serial numbers as per the list herewith as follows:

1. Any defect in workmanship or material which may develop within a period of one year from the date of shipment of said cells by us will be corrected free of charge, f. o. b. Orange, New Jersey.

2. If at any time within a period of TEN YEARS from the date of said shipment, any of said cells shall, when tested under our supervision, be found incapable of delivering at least _____ per cent. of their rated capacity of _____ ampere-hours, we will replace them with other cells having full rated capacity at a charge to you for each cell equal to the list price thereof at the date of accession by us of this guaranty less an allowance, for the cell replaced and returned to us, equal to the percentage of its list price set opposite the period during which the benefit of this guaranty is claimed in the following schedule:

Period during which benefit of guaranty is claimed	Percentage of list price allowance
First year.....	100 per cent.
First three months of second year.....	75 per cent.
Second three months of second year.....	75 per cent.
Third three months of second year.....	70 per cent.
Fourth three months of second year.....	67 per cent.
First three months of third year.....	64 per cent.
Second three months of third year.....	61 per cent.
Third three months of third year.....	58 per cent.
Fourth three months of third year.....	56 per cent.
First three months of fourth year.....	52 per cent.
Second three months of fourth year.....	49 per cent.
Third three months of fourth year.....	47 per cent.
Fourth three months of fourth year.....	44 per cent.
First six months of fifth year.....	40 per cent.
Second six months of fifth year.....	37 per cent.
First six months of sixth year.....	34 per cent.
Second six months of sixth year.....	31 per cent.
Seventh to tenth years inclusive.....	25 per cent.

50%

[ATTACHMENT]

All cells furnished to replace others hereunder will likewise be covered by this guaranty, subject to all the conditions herein contained, their replacement allowance being based upon the date of their shipment by us to you in accordance with the foregoing schedule; provided however that this agreement and guaranty and our responsibility hereunder shall not extend beyond the expiration of ten years from the date of shipment by us of the original battery of cells covered hereby.

All calls to be replaced shall be delivered to us f. o. b. Orange, New Jersey. All calls supplied hereunder will be delivered by us f. o. b. Orange, New Jersey. All calls and parts thereof replaced by us hereunder shall become our property. We reserve the right to require payment of the aforesaid charge in cash before replacing any cells hereunder unless your credit with us is satisfactorily established at the time of such replacement.

This guaranty and agreement is subject to the following conditions and is not binding upon us unless these conditions be faithfully observed:

- A. That all said cells be installed in a manner approved by us.
- B. That all said cells be used only in connection with apparatus approved by us and maintained in reasonably good repair.
- C. That all said cells be cared for and operated in accordance with our standard printed instructions.
- D. That our authorized inspectors and agents have access to said cells for test and inspection at any reasonable time.
- E. That all of said cells be used only for the purposes for which same are furnished to you, and used only within the limits of the United States, which for this purpose shall be considered not to include its insular possessions, Alaska or the Panama Canal Zone.

This guaranty and agreement applies only to the above cells sold to you and is not assignable or transferable. Furthermore, this guaranty and agreement shall not be binding upon us with respect to any cell lost or destroyed, or with respect to any cell damaged or injured through or by misuse, abuse, fire, wreck, collision, accident or other cause foreign to the service for which it is intended.

This guaranty and agreement is subject to the condition that we shall not be liable for any delay in replacing any cells hereunder due to any strike, fire, flood, war or any unavoidable cause, or due to inability to obtain or delay in obtaining material; nor for any other delay unless caused by our failure to use reasonable diligence in supplying cells for such replacements.

Orange, New Jersey

EDISON STORAGE BATTERY COMPANY

Date:

By _____
Vice President

Accepted: _____

By _____

Date _____

[ATTACHMENT]

Data relating to vehicle in which the battery hereby guaranteed is to be exclusively used:

Name of Manufacturer _____

Type of Vehicle _____

Manufacturer's Vehicle No. _____

LIST OF BATTERY CELL NUMBERS

[ATTACHMENT]

Edison
Storage Battery
Guaranty

11-10-1921

FUNCTION Storage Bat .ry
FROM Stephen D. Lambert
TO Executive Committee

(FINANCIAL OR NONFINANCIAL) NO
DATE November 22, 1921
EFFECTIVE Date of issue

SUBJECT American Railway Express Co.
(Mr. La Solum and Mr. Rhodes)

Manufacture file

In accordance with Mr. Thomas A. Edison's suggestion of yesterday that I personally go to Mr. La Solum and talk to him about our contractual relations with them, Mr. Yagan 'phoned Mr. La Solum at his house last evening and arranged for the discussion which took place at Mr. La Solum's office this afternoon.

I find that Mr. La Solum is fully awake to the fact that the mal-adjustment of commodity prices has increased the competitive advantage of our lead competitors. In other words, while the materials entering into the make-up of our competitors' products have returned to within a few percent of their pre-war figure, the materials entering into our product still cost a considerable percentage more than was the case in the pre-war days. As Mr. La Solum expresses it, this is something which neither Edison, Exide or the American Railway Express can control - all that we can do is to have confidence in the ultimate success of electric transportation and look forward to the time when the re-adjustment of commodity prices will be completed, at which time we hope the above mentioned disparity in costs, will in large measure, be removed.

Mr. La Solum asks us not to place him in the position of having to say that it costs more to operate a Nickel Iron Potassium Battery than a lead Sulphuric battery. As near as he can determine from the figures which they have compiled to date on the comparative cost of operating the two classes of batteries, they have found that while the cost of repairs and upkeep of the Lead is a little greater than that of Edison, it is only greater by such a small amount as to be offset by the slightly greater quantity of charging current used by the Edison.

Mr. La Solum agreed that while this larger consumption of current by the Edison Battery could be explained away by the Edison engineers, nevertheless, by his own "rough-house" methods of calculation based upon his experience and actual practice, he was convinced that his statements relative to same were true.

In other words, he was satisfied in his own mind and thoroughly believed that the cost of operating the two batteries was roughly the same.

Relative to the comparative life of the two batteries, he stated that the Exide people were constantly improving the life of their Iron-Clad Battery so that at the present time, he was securing an average life of about 33 months, while from the Edison he was securing an average life of about 66 months, although he believed that with the gradual elimination of the C type, the greater predominance of the A's would tend to increase this average by

possibly as much as six months additional life. However, many of the Iron-Olad batteries were now showing a life of 36, 37 and 38 months, so that their records to date indicated a two to one life of Edison over the Exide Iron-Olad.

Fortunately for us, he is disposed to effect the increased investment and interest charges in connection therewith against the fact that they only have half the number of replacements to make.

By this method of reasoning, he arrives at the conclusion that he is justified in paying for a new Edison twice the price of an Exide Iron-Olad. But if he were to pay as much as one cent more than double the Exide Iron-Olad price, he would then have to say that Edison was more costly than Lead.

Mr. Le Sohm is that self-made, practical type of man that conveys the impression of thoroughly believing what he is saying, and in a spirit of being absolutely fair, has balanced this thing in his own mind and arrived at the balancing point, namely: two to one of life and two to one of cost, which it would be very difficult and probably unwise for us to try to upset.

He states that there is absolutely no question about the price of our new batteries in comparison with the price of Exide Iron-Olad, and according to such competitive line on the situation as our Sales Department has been able to secure from time to time in the past, he is right in this regard.

Our competitors uniformly offer him replacements at 80% of what he pays for new batteries, so that on this basis, namely 80% of our new battery price to him, which is 30% off list, he can afford to pay for the replacement of one of our batteries from which he has secured full and satisfactory life, list less 44%, that is 56% of list.

In view of the fact that they use A-B's of which the list price is \$38.00, or \$19.00 an A-4, this discount would net us and cost him \$10.64 per A-4 replacement.

My call had the effect of clearing up one phase of misunderstanding which has always existed in my mind relative to Mr. Le Sohm's demands on us, in that I have always understood from the Sales Department that Mr. Le Sohm wished us to adopt a sliding scale based upon five years fifty percent, and pro rata for any shorter life, but with no additional pro rata compensation to us for a life longer than five years.

I find that when he talks pro rata, he means the following, which is decidedly better than the interpretation as I have heretofore understood it. The figures which he actually has in mind representing their payments to us for battery service are as follows:

List price	100%	\$19.00
Loss Discount	<u>30%</u>	<u>5.70</u>
Cost of New Battery	70%	\$13.30
Renewal Cost	<u>80%</u>	<u>80%</u>
5th Year (Second Half)	56%	\$10.64
(First Half)	<u>50.4%</u>	<u>9.58</u>
4th Year (Second Half)	44.8%	8.51
(First Half)	<u>39.2%</u>	<u>7.45</u>
3rd Year (Second Half)	33.6%	6.38
(First Half)	<u>28.0%</u>	<u>5.32</u>
2nd Year (Second Half)	22.4%	4.26
(First Half)	<u>16.8%</u>	<u>3.19</u>
1st Year (Entire First Year)	11.2%	2.13

Mr. La Schum does not feel in his own mind that we are under any obligation at the present time to either sell them new batteries or make replacements for an indefinite period at the present schedule of prices and discounts if we find it necessary to change same. He states that while he would regret to have present conditions, which he believes will only be temporary and soon be re-adjusted, cause us to feel that we must increase our list prices or decrease our discounts further than provided for in the above schedule, that if we were to find it necessary to do so, that they are in a position, due to the large number of their trucks which are equipped with Universal motors usable with either Edison or Lead batteries, to merely switch their new business or their replacements to Lead. He states that they would try to hold off as long as possible from so changing over their replacements, especially if they felt assured that any decrease of discounts which we might introduce, would be only temporary, but on the whole, their position is best summarized by the fact that they recognize the good qualities of the Edison. They believe that electric transportation is the coming thing; that as yet electric transportation has not come into its own; they want to do everything in their power to assist us to keep up the fight until electric transportation does come into its own, which they thoroughly believe it will do in the not too distant future, and as a measure of aiding us along this line, are willing to pay us as much for our product per month of life as they pay per month of life to our competitors, but beyond this point do not feel that they would be justified. Neither would they advise that we put them in the position where it becomes necessary for them to admit that the price of Edison is higher than the price of Lead.

— o o o —

Mr. La Schum has in mind that it would be much better from both our stand-points if we could exchange letters defining our understandings one with another, and to this end, he will tomorrow prepare draft of his understanding

- 4 -

and we will do likewise, these drafts to be used as a basis of discussion which we will probably have either on Friday or the early part of next week.

Manuelt

D
1922

FEB -4 '32

Database
Storage

Mr. Edison:-

You asked me to check the employees
on salary (private pay roll) with the end in view
of reducing same.

Attached is my suggestions, have not been able to thoroughly investigate each case, but they are my honest opinion and as I see conditions.

There may be good reasons for not acting on some, but there is a field for some reductions and savings.

Suggest that if you consider any of it advisable to have one of your men carefully investigate in detail or send list to Mr. Hagan and ask why all or part cannot be done.

~~I am giving each one a separate
sheet to write on. In the evening after supper
each shall come out and return one for your
fraternal reply to it acting toward~~

For the good of the organization
and not to make it any harder for me over
here kindly treat this strictly confidential
as to its source or where the information
came from. Saml.

[ENCLOSURE]

STORAGE BATTERY:

Needed

Pagan, Monahan, Blair -

Question the necessity of all three. Could not at least one be eliminated. If we must have a General Manager, why cannot he also be Works Manager, or Sales Manager along with the General Manager's duties. A man should be able to handle both.

Now have:

Pagan - Vice-President & General Manager
Blair - Sales Manager
Monahan - ? (assume Works Manager or Supt.)

Three men in all when two should be enough.

SUGGEST:

1. General Manager (and Works Manager)
2. Sales Manager

o r

1. General Manager (and Sales Manager)
2. Works Manager

Mr. Kolbert - Listed in Pagan's Office. Was there first at the July reduction, was then transferred to Mumbert's office, and now back to Pagan.

Mr. Pagan has Miss Stalker for Stenographer and Secretary.

Why Kolbert? Is not his duties in parallel with Wilson in Mumberts office? as far as the Battery is concerned? or could not these jobs be combined and one man handle either Kolbert's or Wilson's work. Moreover, Balvire who is a service clerk in Sales, could do this work of Kolbert.

If Kolbert's duties are records and statistical work, a bright young girl could keep this up.

This one looks like excess baggage. Am informed that pull is keeping this man.

[ENCLOSURE]

STORAGE BATTERY

SALES - Orange.

Three men. Wilson, Sanborn, Rowick. Men are listed and called General Road Salesmen.

Would say that Wilson is. Not much to say about Sanborn.

Rowick is here most of the time. At the July reduction he was sent to Philadelphia and is now back here.

Why not make these men Road Salesmen - or possibly their work can be combined and two men handle, doing away with one.

From present arrangement, on the surface, it looks like one excess baggage.

Also understand friendship comes in here towards retaining one.

Sales - Orange - continued.

There are - Veale, Hartman, Kayes - three men. Combine work and two handle, doing away with one. Would say Kayes.

If this cannot be done, surely a good girl can handle the work, in addition to helping out on typing. Veale and Hartmann taking over that part of Kayes work which a girl cannot do - or Belevre takes over part of the work along with the other two.

Would say that one excess employee here.

ENGINEERING:

Believe that Douglas could be let go or combine his work and that of Sales Engineer Mitchell, eliminating one man, either Douglas or Mitchell.

Under present conditions do not see just why the necessity of a man for the work Douglas does.

They have Douglas, Mitchell and Leach. It does look as though work here could be so arranged that two men could handle, so as to reduce one.

[ENCLOSURE]

STORAGE BATTERY - continued:

ACCOUNTING:

They have increased their force three. Do not look necessary unless it is for inventory. Work surely has not increased to the extent of where three more are required here.

Believe by a combination of work that at least two could be eliminated. Still the work and records here might warrant this help, but on the surface does not look so, or from the hustle in the department.

MANUFACTURING:

Have increased one girl in Stores or Production. Was it necessary. May be due to increased production and required.

FACTORY:

Combine Cell Assembly and Mine Lamp Departments under one Foreman. Now have two, and one could handle under present production.

MAINTENANCE AND CONSTRUCTION:

It appears that they have too many employees. By a careful study could not a reduction be made here.

REPAIR DEPARTMENT:

By a thorough check and study of this Dept. - which would do no harm - believe changes could be put in effect which would be beneficial, also reduce number of employees.

[ENCLOSURE]

STORAGE BATTERY - Continued.

INVENTORY CREW:

This crew has been on quite some time. They should be finished up by now. Speed up and get it over with. The appropriation, I understand, has been used up.

The following should be checked as to why their increase in force:

NEW YORK GARAGE - CHICAGO OFFICE - WASHINGTON OFFICE -

All Salesmen should be checked as to their real worth. Believe that good up to the minute extensive advertising is what counts. Then order takers are required, and not salesmen. By this plan the salesmen could be greatly reduced.

BATTERY-STORAGE

CHARLES EDISON.

✓

DIVISION:

Memo. No. 581

SUBJECT:

Storage Battery for R. R. Signals.

Date 10/22/22.

Mr. Fagan
Mr. McQuinn;

Inasmuch as the Primary Battery Division has for many years specialized in supplying electrical energy for the operation of Railroad signaling functions, it has long appeared to me logical, that it should handle the sales of Edison Storage Batteries in this field as well as its own product.

Without going into detail on the subject, I wish to point out certain outstanding advantages.

1. Storage and Primary Batteries are direct competitors of each other in several phases of the signaling field. A consistent policy, carefully administered, is necessary to preserve a proper balance between Primary and Storage Battery effort. This can best be accomplished by having a single executive head do the steering, rather than two, as at present. Handled together, Primary and Storage Batteries can be coordinated and made to supplement each other properly, adding to the strength of our position with the Railroads on both products. Handled separately, one type will always tend to crowd out the other.
2. Single management will eliminate waste in sales effort through making it unnecessary for both Primary and Storage Battery companies to have men covering the same field.
5. A salesman handling both Primary and Storage Batteries is free to urge on signal engineers the best form of electrical energy for a given purpose in an unprejudiced way. A competitor would not be able to walk away with the business while two Edison salesmen are each trying to convince the signal engineer that his form of energy is best.

(2)

4. With a single management we present a united front to the outside. Confusion in the minds of purchasers as to who is who in our organization is eliminated. In the signal field we would have but one point of contact with the outside, making it easy to fix responsibility for loss of business, bad service, etc.
5. It eliminates the possibility of inaction on the part of both organizations through the fear that they are treading on each other's toes.

There are other arguments in favor of this change.

I propose, therefore, the following resolutions be adopted:

RESOLVED:

Effective November 1st, 1922, that part of the business of the Edison Storage Battery Co. that has to do with the selling and supplying of electrical energy for the operation of Railroad signaling functions and the field service pertaining thereto shall be taken care of by the Primary Battery Division of Thomas A. Edison, Inc., and:

That suitable internal agreements providing for equitable compensation to both divisions, and for working rules and methods, be executed forthwith.

CHARLES EDISON.

Comm file Battery - Storage

November 21, 1922

Deutsche Edison Accumulatoren Co.,
Askaniischer Platz 3,
S.W. 11, Berlin, Germany

Gentlemen:

If you will refer to Paragraph 5 of your agreement with me of January 1, 1914, you will note that there are two classes of payments provided for in the said paragraph:

(a) Royalties payable on the 15th day of January, April, July and October of each year at the rate of Twenty-four one-hundredths of a cent (\$.0024) per ampere hour capacity of each storage battery cell manufactured each quarter during the life of the agreement, payable in United States Dollars.

(b) An additional amount payable each year on the anniversary of the date of the agreement in case the payments to be made under (a) during the year shall be less than the sum of Sixty Thousand Marks (M 60,000).

Taking the figures contained in the statement which you furnished me on October 31, 1921, the amount now due to me for royalties computed in accordance with Paragraph (a) hereof amounts to \$8,056.30, made up as follows:

<u>Year</u>	<u>Ampere Hour Capacity</u>	<u>Royalty</u>	<u>Amount</u>
1914	1,329,791.20	\$.0024	\$3,191.50
5	1,004,774.50		2,411.46
6	803,191.25		1,928.25
7	635,781.30		1,525.68
8	430,398.50		1,032.96
9	121,997.75		292.79
1920	<u>62,555.60</u>		<u>149.68</u>
	4,387,300.00	\$.0024	\$10,529.52
	Previously paid in 1914		<u>2,471.22</u>
	Balance due		\$8,056.30

I consider this amount to be due and payable to me in United States Dollars.

In addition to above amount, there are three items standing on our books dating back to April 1908 as follows:

April 1908	Royalty	\$1,223.04
August 1908	"	1,092.00
November 1914	Our Invoice 10581	
	Acct Austrian	
	Patent Tax	<u>48.92</u>
	Total	\$2,353.96

I, therefore, request you to remit to me the above mentioned amounts, totaling (two items) \$10,412.26 (Ten Thousand Four Hundred Twelve Dollars Twenty Two Cents), in United States Dollars by New York Draft.

I shall appreciate it if you will give this matter your prompt attention.

Yours Very Truly,

TELEPHONE AUDUBON 0636

E. N. GOODMAN
Electrical Engineer
600 WEST 140TH ST.
NEW YORK

Mr. Edison
E. N. Goodman

What battery is this - what tubes etc
May 25, 1922

Edison Storage Battery Co.,
Orange, N.J.

Gentlemen:-

Attention: Mr. Blair, Sales Manager.

I just purchased from the U.S. Navy one of your submarine batteries, consisting of 200 cells, having a discharge rate of 3150 amperes for one hour, or 1325 amperes for three hours

Dimensions of each cell are 18-3/4" X 9-3/32" X 48-1/2" including supporting insulators. Weight 665 pounds per cell.

This battery has never been used, and I thought you might be interested in purchasing same. I would be pleased to have your offer if interested.

Thanking you for a reply, I am,

Very truly yours,

ENG/S

E. N. Goodman

[ATTACHMENT]

Charles I think
we better not touch it
the tubes are poor & you
don't even know
what we are not interested

As far as I can
learn fitting is the
last "3" waiting

It has 16 tubes
It sold for \$43,000
" cost was \$60,000
to make.

Lee

Egerton

Walker - not interested
Drayton letter.

S.E. 1927-2320-2L
OLD NO. 1242

EDISON STORAGE BATTERY CO.
Memorandum

June 19, 1923

MR. CHARLES EDISON:-

This covers a new form of combined steamer and still which this Company has developed at our request for use in electric truck garages.

The steamer will furnish sixty pounds of steam for blowing off and cleaning cells, and the still will produce at a maximum five gallons per hour of distilled water. The heating is automatic, the water supply is automatic, and the whole outfit is to pass standard boiler inspection.

I am ordering this for the New York Garage as a place where we may give the thing a thorough practical trial.

H. C. EDISON

Thos. A. Edison
Chief Engineer
Ed. Stor. Bldg.

Exhibit
450.00

What do
you say?

OK for our garage in my
Bldg. - but we should not
handle it for selling to our
customers.

(COPY)

Lithium Hydrate

Nov. 28, 1923.

Mr. Egerton:

Lithium Hydrate is the most ticklish product in any of the Edison interests from the standpoint of insecurity of supply.

Outside of the Maywood Chemical there are no manufacturers of this product on anything like a commercial scale anywhere in the world?

Nobody else has lithium hydrate to any extent. We consume probably 90% of the world's production. There are no stocks distributed around the country available in case of emergency.

If anything happens to Maywood we are absolutely stuck.

Mr. Edison has taken some steps to protect this situation but he is not yet ready.

Not only do I think we should have a three months' supply always on hand but also I think this stock should be stored in two or more places.

At one time we had a rule not to let the stock drop below a certain number of pounds but I have forgotten the amount.

C.E.

P.S. Mr. Edison said he would see the Maywood people, so you had better see Mr. E. before doing anything about this.

CE

D
1924

Battery Storage

✓

THE THOMPSON & NORRIS COMPANY

CORRUGATED PAPER AND SHIPPING CASES

PRINCIPAL OFFICE & WORKS,

CONCORD & PRINC STREETS

BROOKLYN, N.Y.

FACTORIES
BROOKLYN, N.Y.
BOSTON, MASS.
BROOKVILLE, IND.
PULP MILL
BOARD MILL
GORDON, GA.

FACTORIES
MONTREAL, QUE.
TORONTO, ONT.
LONDON, ENGLAND.
CABLE ADDRESS
"CORTEX-BROOKLYN"

BROOKLYN, N.Y. Oct. 18th, 1924

PR
Mr. Edison
P.S. note & ret.
g.

Allen

Mr. Charles Edison,
Edison Storage Battery Co.,
Orange, N.J.

Dear Mr. Edison:-

I beg to acknowledge, with thanks, your letter
of the 17th instant, enclosing first dividend check for the
Edison Storage Battery Co. (2% on the Common Capital Stock).

Please remember me kindly to your good parents
and with best wishes, I remain

Charge
noted

Yours very truly,

Justin Thompson

BATTERY-STORAGE

Back

December 30, 1924

MR. T. A. EDISON:

I have your Traveler's Report signed by H. T. Jones and note your comment thereon.

The little Booklet referred to by the Traveler is the only Booklet or folder which I have permitted an Advertising Agent to get out. The other booklets and literature has practically all been written by myself.

The Advertising Agent wanted to have this booklet read- "For A Perfect Radio Christmas Use Edison Batteries." I made the point that Radio is not perfect or nothing is perfect. This booklet, as I see it, does not advocate Radio in any way. It does say "Edison Batteries for a better Radio Christmas." We know that one will get better service from any make of Radio by using Edison Batteries than he can from using lead or dry cells, since according to your Traveler's Report, Tubes and Batteries give 85% of the Radio trouble. Certainly one would have better service from his Radio Outfit if he eliminated battery trouble - that is why the booklet reads "For A Better Radio Christmas Use Edison Batteries."

We have not advocated the use of Radio in our advertising or our direct by mail literature. Copy of all the literature which we have sent out is attached hereto.

What we are trying to do is to sell Edison Batteries to the people who buy Radios', not through our recommendation but through their desire for Radio.

I appreciate the fact that Radio is in direct competition with the Phonograph and I would certainly be willing to retire from the Radio Battery business at once if I thought that our going after this business would in any way effect the sale of the Phonograph. I am interested not only in the Battery Company making money, but interested in the entire industry making money.

I feel that it would have been better if the wording on this bulletin had been something like this- "For Better Service From Your Radio - Use Edison Storage Batteries", instead of "For A Better Radio Christmas Use Edison Batteries."

-2-

Of course you understand, before sending literature to any of your dealers the matter was taken up with you personally and you said "Go Ahead" and after I had gotten your authority to do this I got in touch with Mr. Farrier who gave us the names of the dealers which he wanted to material to go to.

G. E. STANFORD

GES:EME

[ATTACHMENT]

Put on Desk

Mr. Edison:

The other two travelers -
Sweeney and Sullivan - have
also said that, because the
dealers received literature on
the Edison Radio Patent, they
find it hard to talk down
Radio. The dealers tell them
it is inconvenient for one
Edison dept. to advertise
Radio and another Edison
dept. to discourage it.

I have told the travelers
to say that we do not believe
that Radio compares with the
Edison Phonograph in quality,
but for those who have Radio
sets, and who want better than
(over)

[ATTACHMENT]

The average service on Batteries,
we regard the Edison Battery is
the thing.

Any additional "converters"
you can give me will be very
much appreciated, as when
talking with dealers on the
phone, or in the office, I am
sometimes asked, "Why is it,
if the Edison Company don't
advertise Radio, that they
have come out with a Radio
battery and ask us to take it on?"

Wm

[ATTACHMENT]

TRAVELER'S DAILY REPORT

12-15-24 19__

Reprint in duplicate and forward both copies to Jobber, who will forward the copy to Chicago and retain the other for his file.

Disc ☐ Disc and Amberola ☐ (Check proper classification)
Amberola ☐

Town _____ State _____
Dealer _____ Street Address _____
Kinds of "Talkers" Handled _____ No. of T. M. Dealers in Town _____
Condition of Principal Industries of Locality? _____
Attitude of Dealer toward Edison? _____

CANVASSING Yes No
Does Dealer Canvass? ☐ ☐ Are They Satisfied with Results? ☐ ☐
Number of Canvassers? _____ ADVERTISING
Pull Time? ☐ ☐ How Does Dealer Advertise?
(a) Newspapers? ☐ ☐ (c) Use Our Window Displays? ☐ ☐
(b) Use Our Copy? ☐ ☐ (d) Does Jobber Mail Supplements? ☐ ☐
(c) Use Our Electro Service? ☐ ☐ (e) Does Dealer Mail Supplements? ☐ ☐
(d) Use Our Streamers? ☐ ☐ (f) Is Edison Stock Prominently and
(e) Use Record Hangers? ☐ ☐ Attractively Displayed? ☐ ☐
How Many Radio Dealers in Town? _____ (g) Other Forms of Advertising? ☐ ☐

DEALER'S STOCK

Model	Quant.	Model	Quant.	Model	Quant.	Model	Quant.	Amberola	Quant.
Disc Records: White Label				; Black Label				; Amberol Records	

REMARKS: Tell specifically what you did to help dealer; list complaints; special comments; etc.

I have always discouraged the dealer, so far as possible, to keep away from Radio, and now our dealers have had circulars sent them by the Edison Co, at Orange, on A and B Batteries. These dealers have sent in the first call requesting prices etc. and have received a pamphlet entitled "For a Better Radio Christmas." Now they say "Edison has started in Radio. When is he going to put out a set." The dealers all seem anxious to get the exclusive selling rights for the Batteries, even those who do not handle Radio at the present time want to put them in, and then it won't take much talking on the part of Radio Salesmen, or many inquiries for Radio before they are stocked up. They argue that "Edison won't put out a Radio, either because he is not in favor of it or is afraid it will hurt the sale of Phonographs, and still he comes out with a circular advocating a Better Radio Christmas."

You can reach me
On _____ At _____
On _____ At _____

Traveler H. J. Jones
Jobber P.C. of M

Edison Storage Battery Company

Battery Service Guaranty

Industrial Truck or Tractor Service

GUARANTY No. _____

SALES ORDER No. _____

No. OF CELLS _____ TYPE _____

DATE OF ORIGINAL SHIPMENT _____

TO _____

192 _____

1. **Guaranty.** We hereby guarantee to correct free of charge, f. o. b. our nearest Service Station, any defect in workmanship or material which may develop within a period of one year from the date of shipment by us of all the Type _____ cells bearing serial numbers as per the list herein.

2. **Agreement.** As an assurance to you that the **QUALITY** and **DURABILITY** possessed by the Edison Storage Battery shall contribute to your benefit, we agree that if at any time within a period of **TEN YEARS** from the above date of original shipment, any of said cells shall, when tested under our supervision, be found incapable of delivering at least 80% of their rated capacity of _____ ampere hours after a normal charge, we will replace them with new cells having 100% of rated capacity at a charge to you for each cell equal to the list price thereof at the date of replacement by us, less an allowance, as hereinafter provided, for each cell replaced and returned to us, equal to the percentage of the list price thereof at the date of replacement set opposite the period during which the benefit of this replacement is claimed in the following schedule:

Period during which benefit of replacement is claimed	Percentage of list price allowance
First year	100 per cent.
First six months of second year	75 per cent.
Second six months of second year	65 per cent.
First six months of third year	55 per cent.
Second six months of third year	50 per cent.
First six months of fourth year	45 per cent.
Second six months of fourth year	40 per cent.
First six months of fifth year	35 per cent.
Second six months of fifth year	30 per cent.
Sixth year	25 per cent.
Seventh year and last 6 months in 8th year	20 per cent.
Second 6 months in 8th year and 9th and 10th years	25 per cent.

3. All cells furnished to replace others hereunder will likewise be covered by this guaranty and agreement, subject to all the conditions herein contained, their replacement allowance being based upon the date of their shipment by us to you in accordance with the foregoing schedule; provided, however, that this agreement and guaranty and our responsibility hereunder shall not extend beyond the expiration of ten years from the date of shipment by us of the original battery of cells covered hereby. However, if at the time of any replacement of cells hereunder, we shall be then offering to customers for the same class of service

on last month of 10th year a new battery given in its total worn out

Data relating to vehicle in which the battery hereby guaranteed is to be exclusively used:

Name of Manufacturer

Type of Vehicle

Manufacturer's Vehicle No.

LIST OF BATTERY CELL NUMBERS

as that covered by this agreement the same or a more favorable guaranty or service agreement, you shall have the option, upon notice to us in writing, of electing that we give you with the new cells a new guaranty and agreement such as we may then be offering, to apply to said new replacement cells, in lieu of this guaranty and agreement.

4. All cells supplied hereunder shall be delivered by us f. o. b. Orange, New Jersey, terms; Net 30 days, 2% discount for cash within 10 days from date of invoice. We reserve the right to require payment in cash of the full invoice value of all cells supplied hereunder before replacing any cells hereunder unless your credit with us is satisfactorily established at the time of such replacement.

5. All cells replaced by us hereunder shall become our property, and shall be delivered to us f. o. b. Orange, New Jersey; and shall be shipped to us with transportation charges prepaid, within thirty days after arrival of the replacement cells supplied hereunder. In case of your failure to ship us in the manner and within the period hereinbefore agreed upon any of the cells replaced hereunder, we shall at any time thereafter have the right to bill you for such cells not shipped as aforesaid at the amount of the allowance made therefor, and you will accept and pay such bill within thirty days from the date thereof.

6. If, at the time of any replacement hereunder, we are required to pay any Federal, State, County, Municipal or other tax on account of such replacement, we shall have the right to add the amount of such tax to the charge made you for such replacement.

7. This guaranty and agreement is subject to the following conditions:

A. That all said cells be installed and used only in connection with apparatus approved by us and which is maintained in reasonably good repair.

B. That you use only electrolyte manufactured by us, flushing with distilled water, keeping the electrolyte at all times above the tops of the plates and at a temperature below 115° Fahrenheit.

C. That our authorized Service Men and Agents have access to said cells for test or inspection at all reasonable times.

D. That all of said cells be used only for the purpose for which same are furnished to you, and used only within the limits of the United States (which for this purpose shall be considered not to include its insular possessions, or the Panama Canal Zone), Alaska, and the Dominion of Canada.

8. This guaranty and agreement applies only to the above cells sold to you and is assignable or transferable only with our written consent.

9. Furthermore, this guaranty and agreement shall not be binding upon us with respect to any cell lost or destroyed, or with respect to any cell damaged or injured through or by misuse, abuse, fire, wreck, collision, accident or other cause foreign to the service for which it is intended.

10. This guaranty and agreement is subject to the conditions that we shall not be liable for any delay in replacing any cells hereunder due to any strike, fire, flood, war or any unavoidable cause, or due to inability to obtain, or delay in obtaining, material; nor for any other delay unless caused by our failure to use reasonable diligence in supplying cells for such replacements.

Orange, N. J.

EDISON STORAGE BATTERY COMPANY

By _____
Vice-President and General Manager.

Accepted

By _____

EDISON STORAGE BATTERY CO.

BATTERY SERVICE
GUARANTY

**Edison Storage Battery Company Records
Corporate Documentation (1901-1924)**

This folder contains agreements, minutes, certificates, and other official documents pertaining to the formation and activities of ESBCo. There are also draft versions of official agreements, which Edison helped to prepare. Included are items relating to the organization of the company in 1901, to increases in its capitalization in 1910 and 1917, to mortgages obtained, and to sales agreements executed with the Lansden Co., F. J. Lisman & Co., and others. Some of the documents concern agreements that ESBCo signed in 1912 with the General Vehicle Co. and the Hartford Electric Light Co. for supplying, charging, and maintaining storage batteries in electric vehicles. Also included are meeting announcements with marginal notations by Edison; minutes of individual meetings; three addresses delivered at stockholders' meetings; and a 1919 filing for the Internal Revenue Service regarding the assets and liabilities of ESBCo and the valuation of Edison's patents. Related material can be found in the Harry F. Miller and Richard W. Kellow Files (Legal Series).

Approximately 80 percent of the documents have been selected. The unselected material consists of documentation regarding the Edison Storage Battery Supply Co.; duplicate copies of agreements; drafts of agreements that were not executed; patent assignments; routine meeting announcements; and items that duplicate information in selected material.

LEASE

THOMAS A. EDISON

TO

EDISON STORAGE BATTERY
COMPANY

DATED JUNE 29, 1901

HOWARD W. HAYES,
COUNSELLOR AT LAW,
765 BROAD STREET,
NEWARK, N. J.

BEFORE ME, PRESIDENT, WITNESSES
THE ABOVE PARTY.

WITNESSES: JAMES H. HAYES, JAMES H. HAYES, JAMES H. HAYES, JAMES H. HAYES, JAMES H. HAYES.

THIS INDENTURE made this twenty-ninth day of June, 1901, between -

THOMAS A. EDISON,

of the Township of West Orange, in the County of Essex, and State of New Jersey, of the first part, and -

EDISON STORAGE BATTERY COMPANY

a corporation organized under the laws of the State of New Jersey and located in said Township of West Orange, of the second part, WITNESSETH:

That the said party of the first part for, and in consideration of the rents, covenants and agreements hereinafter mentioned, reserved and contained, on the part and behalf of the party of the second part and its successors, to be paid, kept, and performed, has leased and demised and to farm let, and by these presents doth lease, demise and to farm let, unto the said party of the second part and its successors and assigns all those two certain tracts of land and premises hereinafter particularly described, situate, lying and being in the Township of Bloomfield, in the County of Essex and State of New Jersey.

THE FIRST TRACT: Beginning at a point in the Northwesterly line of Belmont Avenue, eight hundred and forty-three feet northeasterly from Bloomfield Avenue; thence running northeasterly along the northwesterly line of Belmont Avenue one hundred and nine feet; thence northwesterly at right angles to Belmont Avenue two hundred and seventy feet; thence southwesterly parallel to Belmont Avenue one hundred and nine feet; thence southeasterly at right angles to Belmont Avenue two hundred and seventy feet to the northwesterly

OK.
Exh. 11-7-77

line of Belmont Avenue and place of Beginning.

THE SECOND TRACT: Beginning at a point in the northwesterly line of Belmont Avenue eleven hundred and forty feet northeasterly from Bloomfield Avenue; thence running North-easterly along the northwesterly line of Belmont Avenue two hundred and fifty feet; thence Northwesterly at right angles to Belmont Avenue three hundred and fifty feet; thence southwesterly parallel with Belmont Avenue two hundred and fifty feet; thence southeasterly at right angles to Belmont Avenue three hundred and fifty feet to the northwesterly line of Belmont Avenue and place of Beginning.

Together with the appurtenances and the building now erected on the said first tract; to have and to hold the said above mentioned and described premises with the appurtenances unto the said party of the second part, its successors and assigns from the twenty-ninth day of June, in the year Nineteen hundred and One, for and during and until the full end and term of five years then next ensuing, and fully to be completed and ended, yielding and paying therefor unto the said party of the first part, his heirs or assigns, yearly and every year during the said term hereby granted, the yearly rent or sum of-

FIVE HUNDRED DOLLARS

lawful money of the United States of America in equal quarter yearly payments in advance, to wit: on the first days of July, October, January and April in each and every year during the said term; provided always, nevertheless, that if the yearly rent above reserved, or any part thereof, shall be behind or unpaid, on any day of payment whereon the same ought to be paid, as aforesaid; or if default shall be made in any of the covenants herein contained on the part and behalf of the said party of the second part, its successors, to be paid,

kept and performed, then and from thenceforth it shall and may be lawful for the said party of the first part, his heirs or assigns, into and upon the said demise premises, and every part thereof, wholly to re-enter, and the same to have again, repossess and enjoy, as in his or their first and former estate, anything hereinbefore contained to the contrary thereof in any wise notwithstanding.

And the said party of the second part, for itself and its successors, doth covenant and agree, to and with the said party of the first part, his heirs and assigns, by these presents, that the said party of the second part, its successors or assigns, shall and will, yearly and every year, during the term hereby granted, well and truly pay, or cause to be paid, unto the said party of the first part, his heirs or assigns, the said yearly rent of-

FIVE HUNDRED DOLLARS

above reserved, on the days, and in the manner, limited and prescribed, as aforesaid, for the payment thereof, without any deduction, fraud or delay, according to the true intent and meaning of these presents; and that the said party of the second part, its successors or assigns, shall and will, at their own proper costs and charges, bear, pay and discharge all such taxes, duties and assessments whatsoever, as shall or may, during the said term hereby granted, be charged, assessed or imposed upon the said described premises; and that on the last day of the said term, or other sooner determination of the estate hereby granted, the said party of the second part, its successors or assigns, shall and will peaceably and quietly leave, surrender and yield up, unto the said party of the first part, his heirs or assigns, all and singular the said demise premises. And the said party of the first part, for himself, his heirs and assigns, doth covenant and agree, by

these presents, that the said party of the second part, its successors or assigns, paying the said yearly rent above reserved, and performing the covenants and agreements aforesaid, on its and their part, the said party of the second part, its successors and assigns, shall and may at all times during the said term hereby granted, peaceably and quietly have, hold and enjoy the said demised premises, without any let, suit, trouble or hindrance, of or from the said party of the first part, his heirs or assigns, or any other person or persons whomsoever, and may at the expiration of said term remove from said demised premises, all buildings and other structures erected by the said party of the second part upon said premises during the said term.

IN WITNESS WHEREOF the said party of the first part has herunto set his hand and seal and the party of the second part has caused these presents to be signed by its President and its corporate seal to be hereto affixed, in duplicate, the day and year first aforesaid.

Signed, sealed and delivered :

in the presence of :

Attest
J. H. Randolph
Secretary

EDISON STORAGE BATTERY CO.,

Thomas A. Edison
President

Thomas A. Edison

Wm. H. Long

ESBC,

RECEIVED from F. W. Whitridge, twenty thousand dollars (\$20,000), in part payment of the subscription of \$200,000 to the bonds of the Edison Storage Battery Company. The terms of said subscription are not yet definitely settled with all the subscribers, but it is understood that in any event there shall be a bonus of fifty per cent (50%) of the amount of subscription, paid to the subscriber in the stock of the Edison Company at par, either when the entire amount of the subscription shall have been paid, or in any event at the end of three (3) years.

Dated, July 1st 1901.

Edison Storage Battery Co.
By J. G. Dick

MEMORANDUM OF AGREEMENT, made between the Edison Storage Battery Company, a corporation organized under the laws of the State of New Jersey, party of the first part, and the several subscribers, whose names are hereunto annexed, parties of the second part and Thomas A. Edison, party of the third part.

WHEREAS, the party of the first part desires to borrow the sum of Five hundred thousand Dollars (\$500,000.), to be secured by its mortgage bonds, and whereas the parties of the second part are willing to loan the said sum of Five hundred thousand Dollars (\$500,000.).

NOW THIS AGREEMENT WITNESSETH: in consideration of the mutual covenants and agreements herein contained as follows:-

FIRST: The party of the first part agrees to deliver to the subscribers hereto the several amounts of its bonds set opposite their respective names, (as and when the subscriptions thereto shall be called and paid), said bonds to be secured by the first mortgage upon its plant and business and bearing interest at the rate of Six per cent (6%), the same to run fifteen years subject to rights of redemption as provided in said mortgage; and the mortgage securing the same shall provide that before any dividends shall be paid upon the stock of the Company during any fiscal year, Four per cent (4%) of the then outstanding bonds shall be paid or the sum necessary to pay the same set aside out of such

fiscal year's earnings.

SECOND: The subscribers hereto agree to take the several amounts of bonds set opposite their respective names upon the following terms and conditions:-

A.- The Company shall have the right to call as and when it may desire for the payment of any part of the amount subscribed. Such instalments to be called upon twenty days notice.

B.- Upon payment of each instalment the Company shall issue to the subscribers bonds for the amount of such call. The Company shall give to each subscriber upon the payment of the first instalment a certificate of stock in the name of the said subscriber to the amount of Fifty per cent (50%) of the amount of the principal sum subscribed for by him, which said certificate of stock shall be endorsed for transfer by said subscriber and deposited with the Treasurer of said Company, in escrow, and shall be redelivered to said subscriber three years from the date hereof, or upon the calling and paying of One hundred per cent (100%) of his said subscription, if such call of One hundred per cent (100%) shall be made in less than three years from this date; [^] has complied with the terms of this agreement and shall provided such subscriber shall make payment of the instalments as provided therein, if such instalments are not paid the whole or any part of the said stock may be forfeited by the Company. Said certificates of stock being part of the stock to be deposited with the Treasurer of said Company by Thomas A. Edison, as hereinafter provided. The re-delivery of the certificates to each subscriber shall be made as aforesaid irrespective of whether or not the entire amount subscribed shall be called within a period of three years from the date

hereof.

C.- Any portion of said subscriptions which shall not be called for by the Company within a period of three years from the date hereof, shall be cancelled and all liabilities of the subscribers thereunder shall cease and terminate.

THIRD: Thomas A. Edison agrees to deposit with the Treasurer of the said Edison Storage Battery Company certificate for the Two hundred and fifty thousand Dollars (\$250,000.), of stock above mentioned endorsed for transfer to the said subscribers for the purposes hereinabove set forth, and, in addition thereto, stock of the said Company, of the par value of Seven hundred thousand Dollars (\$700,000.), owned by him; reserving to himself the voting power on all of said stock until the entire amount of the subscriptions hereto, which shall have been called, are paid. At such time or at three years from the date hereof, if at that time the entire amount of the said subscriptions shall not have been called, the said Treasurer shall re-deliver to Thomas A. Edison the said certificates of stock of the par value of Seven hundred thousand Dollars (\$700,000.).

FOURTH: During the period contemplated by this agreement, all dividends, if any, shall be paid to the parties in whose names the stock shall be registered, provided however, that any party of the second part who shall be in default, or who shall fail to comply with the terms of this

agreement, shall not be entitled to receive any dividend upon any of said stock which may be standing in his name.

The provisions of this agreement shall extend to and bind the personal representatives, successors and assigns of the respective parties hereto.

Orange, N.J., July 11th, 1901.

Attest: EDISON STORAGE BATTERY CO.
J.F. Randolph, Thomas A. Edison,
Secretary. President.
Thomas A. Edison.

F.W. Whitridge, Atty.	\$200,000.
F.S. Witherbee	5,000.
W.S. Pilling	50,000.
Thomas A. Edison	50,000.
Walter S. Mallory	10,000.
Wm. H. Shelmerdine	50,000.
Theron I. Crane	50,000.
Henry P. Brown	10,000.
James Gayley	25,000.
C.M. Schwab	25,000.
James Gaunt	5,000.
J. Wesley Allison	15,000.
Rich. N. Dyer	5,000.

ESB

Upon payment of each installment
called by the Co. bonds at par

shall be given for to the amount
paid ~~and~~ ^{to the holder of the bonds} ~~and an agreement meeting~~
it will within 3 years from the date of this agreement
that the subscriber shall be

Entitled to 50% of the amount
of the bonds ^{then} issued to him in
stock of the Co. which
stock is to be issued to said

subscriber ^{in any event} within three years
from the date of his ^{original} ~~present~~ ^{subscription}

~~the amount paid in the bonds~~
~~amount paid in the bonds~~

~~In Case the entire amount~~
~~of subscribed amount called~~
~~by the Co within~~

~~In Case the Co~~

In Case the entire amount subscribed
is not called within 3 years
then, stock shall be issued
to the holders of the bonds
~~outstanding~~ according to ~~the~~ Clause B

AN INDENTURE made this day of , 1901
between EDISON STORAGE BATTERY COMPANY, a corporation organized under the laws of the State of New Jersey and having its principal office at West Orange, in the County of Essex in said state, of the first part; and FIDELITY TRUST COMPANY, a corporation organized under the laws of the State of New Jersey, having its principal office in the City of Newark, in the State of New Jersey, Trustee, of the second part:

WHEREAS, the party of the first part proposed to borrow the sum of \$500,000 for the purpose of erecting, establishing and installing a manufacturing plant and exploiting its business and to secure the payment of said sum of \$500,000, has determined to issue its bonds to the amount of \$500,000, being 500 bonds of the denomination of \$1,000 each, numbered from 1 to 500, both inclusive.

And Whereas, the directors of the party of the first part have by resolution, duly passed, authorized the execution of this mortgage and of the bonds hereinafter referred to for the purpose aforesaid to the amount of \$500,000, of the numbers and denomination above mentioned; which said bonds, with the coupons and certificate of Trustee attached are all substantially in the following form:

(Form of Bond)

United States of America

No., State of New Jersey Amount \$1,000.

Edison Storage Battery Company.

First Mortgage six per cent Gold Bond.

Know all Men by these Presents, That Edison Storage Battery Company, a corporation organized under the laws of the State of New Jersey, in consideration of the sum of one thousand

dollars received by it, acknowledges itself to be indebted to the bearer, or, if registered, to the registered holder hereof, in the sum of \$1,000, which sum it promises to pay to the lawful holder hereof in Gold Coin of the United States of America of the 1901 standard of weight and fineness at the office of Edison Storage Battery Company at West Orange aforesaid on the first day of July 1916, (or sooner as hereinafter provided) with interest thereon at the rate of six per cent per annum, payable in like gold coin at said office on the first day of January and July in each and every year on the presentation and surrender of the annexed coupons as they severally mature. And in case of two successive defaults or of two coexistent continuing defaults, although not successive, in the payment of the half yearly instalments of interest which shall have become payable, and which shall have been demanded by presentation of said coupons at said office, the principal of this bond shall become due in the manner and with the effect and subject to the conditions provided in the mortgage securing the payment of the same hereinafter mentioned.

The principal and interest of this bond are payable without any deduction for National, State, County or Municipal taxes, as in said mortgage provided.

This bond is one of a series of bonds of like date, tenor and effect aggregating \$500,000, numbered consecutively from 1 to 500, both inclusive, issued by the said Edison Storage Battery Company. The payment of each and all of said bonds so issued is equally secured without preference, priority or distinction as to the lien or otherwise of one bond over another, except as in the hereinafter mentioned mortgage provided, by a mortgage bearing even date herewith executed by the said Edison Storage Battery Company to Fidelity Trust Company as Trustee,

and conveying to it as Trustee all the property, assets and good-will of the said Edison Storage Battery Company owned or possessed by it at the date of said mortgage, and which it may thereafter acquire, as is more particularly described and set forth in said mortgage.

This bond, until registered, shall pass by delivery. It may, as to principal, be registered in the books of the said Edison Storage Battery Company to be kept at its office in West Orange aforesaid; and if so registered, will thereafter be transferable only upon the books of the said Edison Storage Battery Company by the owner in person or by attorney, unless the last preceding transfer shall have been to bearer, and the transfer by delivery thereby restored; and it shall be susceptible of successive registrations and transfers to bearer, at the option of the holders, but such registration shall not affect the negotiability of the annexed coupons.

This bond is subject to redemption at the sum of \$1,100 and interest as provided in said mortgage. It shall not be valid until it shall have been authenticated by a certificate, hereto annexed, duly signed by the Trustee under the said mortgage.

In Witness Whereof the said Edison Storage Battery Company has caused these presents to be signed by its President, and its corporate seal, duly attested by its Secretary to be hereto affixed, and has hereunto affixed coupons, with the name of its Treasurer engraved thereon, and has caused these presents to be dated the first day of 19 all at West Orange aforesaid.

.....President.

.....Secretary.

(L.S.)

(Coupon)

On the first day of January, 19 Edison Storage
Battery Company will pay to the bearer, at its office in West
Orange, New Jersey, thirty dollars in gold coin of the United
States of the 1901 standard of weight and fineness, being six
months interest on its first mortgage gold bond No.....
on the presentation and surrender of this coupon.

\$20.00

.....Treasurer.

(Trustee's Certificate)

Fidelity Trust Company hereby certifies that the within
bond is one of the series therein described, and that the same
is issued pursuant to the provisions of the mortgage therein
mentioned.

FIDELITY TRUST CO.

By.....2nd Vice President.

NOW, THEREFORE, THIS INSTRUMENT WITNESSETH that the said
party of the first part, for the better securing the payment
of the principal and interest of said bonds, according to the
true intent and meaning thereof, and for and in consideration
of the premises, and of the sum of one dollar to it in hand
paid by the party of the second part, the receipt whereof is
hereby acknowledged, hath granted, bargained, sold, aliened,
enfeoffed, conveyed and confirmed, and by these presents doth
grant, bargain, sell, alien, enfeoff, convey and confirm unto
the said party of the second part, as Trustee as aforesaid, and
its successors, all the following described property, viz:

First: All that tract or parcel of land and premises,
hereinafter particularly described, situate, lying and being in
the Borough of Glenridge in the County of Essex and State of
New Jersey.

BEGINNING in the north-easterly line of Bloomfield

Avenue at the easterly corner of property now or formerly of Mrs. M. Benson, which corner is also distant in said line of Bloomfield Avenue, three hundred and ninety one and sixty four one hundredths feet more or less westerly from the centre line of Herman Street; thence running along Bloomfield Avenue south twenty three degrees, thirty two minutes east, one hundred and sixty nine and sixty hundredths feet; thence north forty five degrees, twenty seven and one half minutes east, five hundred and forty and thirty five one hundredths feet more or less to the southerly line of Belleville Avenue; thence along the same the different courses thereof one hundred and thirty seven feet or more to the north-easterly corner of said Benson's land; thence along the same south forty eight degrees, five minutes west, four hundred and seventy two feet more or less to Bloomfield Avenue and place of BEGINNING.

Being the same premises conveyed to the party of the first part by Thomas A. Edison and wife by their deed dated July 11th, 1901, and recorded in the Register's Office of the County of Essex in book N-34 of Deeds for said County on pages 460 et seq.

Second: All the buildings and works now or hereafter thereon erected, and the machinery now or hereafter placed therein; also all machinery, tools, patterns, apparatus and implements of every kind used by the party of the first part in its business, and office furniture and fixtures; also all patents and patent rights now owned or hereafter to be acquired by party of the first part, including the inventions described in the following application for letters of the United States made by Thomas A. Edison.

(a) Letters Patent of the United States for improvement in reversible galvanic batteries, No. 674,722, granted on the 16th day of July 1901, to Thomas A. Edison.

(b) Application for Improvement in Reversible Galvanic Batteries, filed October 31, 1900, under Serial No. 34,094.

(c) Application for Improvement in Reversible Galvanic Batteries, filed October 31, 1900, under Serial No. 34,095.

(d) Application for Improvement in Reversible Galvanic Batteries, filed January 8, 1901, under Serial No. 42,814.

(e) Application for Improvement in Reversible Galvanic Batteries, filed March 2, 1901, under Serial No. 49,462.

(f) Application for Improvement in Reversible Galvanic Batteries, filed March 5, 1901, under Serial No. 49,934.

(g) Application for Improvement in Reversible Galvanic Batteries, filed March 8, 1901, under Serial No. 49,935.

(h) Application for Improvement in Depolarizers for Reversible Galvanic Batteries, filed May 9, 1901, under Serial No. 59,612.

(i) Application for Improvement in Electrodes for Galvanic Batteries, filed May 17, 1901, under Serial No. 60,401.

(j) Application for Improvement in Reversible Galvanic Batteries, filed June 20, 1901, under Serial No. 65,265.

(k) Application for Improvement in Reversible Galvanic Batteries, filed June 20, 1901, under Serial No. 65,266.

(l) Application for Improvement in Reversible Galvanic Batteries, filed June 20, 1901, under Serial No. 65,287.

(m) Application for Improvement in Reversible Galvanic Batteries, filed June 20, 1901, under Serial No. 65,288.

and the rights of the United States to all improvements made by Thomas A. Edison during the period of five years from the first day of February, 1901, upon the devices described in said applications, and on the manufacturing processes connected with the same, and the good will of the business of the party of the first part and all the property and property rights acquired

or to be acquired by the party of the first part; excepting however all machinery, tools, apparatus and manufactured stock sold in the ordinary course of business, and all earnings, profits and income lawfully used for the payment of dividends to stock holders or for the creation of a surplus.

To have and to hold all and singular the above granted and described premises and property real and personal, with the appurtenances thereto belonging unto the said party of the second part and its successors to the only proper use, benefit and behoof of the said party of the second part and its successors forever.

In trust, nevertheless, for the security of the person or persons who shall at any time be or become, the purchasers or owners of the said bonds or any part thereof.

Provided, however, if the said party of the first part, its successors or assigns, shall well and truly pay, or cause to be paid, the several sums of money in the several bonds hereinbefore mentioned, with the interest, according to the true intent and meaning of the said bonds, and each of them and of this mortgage; or, if the said bonds and the interest thereon shall become in any way fully paid or satisfied; or, if the said party of the first part, its successors or assigns, shall well and truly perform and observe all and singular the covenants, promises and conditions in the said bonds and coupons and in this indenture expressed to be kept and performed and observed by or on the part of the party of the first part; then these presents and the estates and rights hereby granted shall cease, determine and be void; otherwise these presents shall be and remain in full force.

And it is hereby further expressly understood, covenanted and agreed that at any time not less than forty days before the date when any coupons of the bonds hereby secured are payable

the party of the first part may elect to retire such bonds to an amount to be determined by the party of the first part, by a resolution of its Board of Directors, and that upon the passage of such resolution the party of the second part upon receiving a duly certified copy thereof not less than five days after its passage, shall forthwith draw by lot the serial numbers of so many of the said bonds secured by this mortgage as are determined to be retired as aforesaid, and that the principal of such bonds so drawn shall become due and payable on the said next day when said coupons are payable, in the same manner as if such bonds had matured according to the conditions thereof, and that on the presentation and surrender of said bonds, and all coupons thereof coming due after said day, at the office of the party of the first part in West Orange aforesaid, the principal of said bonds, together with ten per cent thereon additional as a premium for advanced payment, shall be paid to the lawful holder thereof; if any of the coupons of said bond thereafter falling due shall not be presented and surrendered with said bond, the amount of said coupon, less a rebate of interest at six per cent per annum shall be deducted from the amount payable on said bond. When the numbers of the said bonds shall have been drawn as aforesaid the party of the first part shall within five days thereafter send notice thereof by mail to the post office addresses of the holders of said bonds, if the same can be ascertained, and advertise for two weeks in at least one daily newspaper published in New York City, in Philadelphia, Pennsylvania and in Orange, New Jersey respectively the several numbers of the said bonds so to be retired, and the time and place where they will be paid. If any of the said bonds so drawn shall not be presented for payment at the place and on the day when the same are made payable as aforesaid, the party of the first part may deposit the amount hereby agreed to be paid on said bonds with

the party of the second part in trust for the lawful owner of such bonds, and such deposit shall be deemed to be a full performance of this covenant so far as said bonds are concerned, and a payment and satisfaction thereon, and the party of the first part shall be released and discharged from any further liability on account of said bonds and the coupons thereof thereafter to become due.

And it is further agreed that if any bond or coupon shall not be presented for payment at the office of the party of the first part in West Orange aforesaid and surrendered on the day that the same shall become due, either by its terms or on account of such drawing as aforesaid, the party of the first part may deposit with the party of the second part the amount due on said bond or coupon in trust for the lawful owner thereof, and such deposit shall be deemed to be a full payment and satisfaction of said bond or coupon within the true intent and meaning of this mortgage.

And it is hereby further expressly understood, covenanted and agreed, that the further trusts, uses, purposes, conditions and covenants for and upon which the property, real and personal, and rights hereinabove described are conveyed to, and are to be held by, the party of the second part, are as follows:

NUMBER ONE (1). So long as no default shall be made in the payment of the principal or interest, or any part thereof, payable upon the bonds hereby secured, as the same shall respectively become due and payable, or in the performance of the covenants herein contained to be performed by the party of the first part, the said party of the first part shall be suffered and permitted by the party of the second part to remain in full possession, enjoyment and control of all the property, real and personal, herein expressed to be hereby mortgaged, and shall be permitted to manage the same and receive the issue and pro-

fits thereof, with the right at all times, as the proper management of the business of the party of the first part may require, to alter, change, add to, repair, remove and replace the machinery, apparatus, fixtures and other appurtenances to the works and plants constructed or owned, or which shall be constructed or owned, by the party of the first part, and conveyed or intended to be conveyed hereby to the party of the second part, provided that the security of said bonds shall not thereby be in anywise reduced or impaired.

And the party of the first part shall have the further right at all times to convey or exchange, free from the incumbrances and trusts hereof, all or any of the real estate now held or hereafter acquired by the party of the first part, which shall no longer be either useful or necessary in the proper and judicious management and maintenance of the business of the party of the first part or of the property hereby conveyed, but in no case shall any sale or other disposition of such real estate be made without the express assent, in writing, of the party of the second part, and it is hereby expressly authorized to release from the operation and effect of this mortgage any property so sold or exchanged, whether the consideration of such sale be wholly cash, or partly cash and partly secured by mortgage on the premises sold. But the property taken in exchange, if such there be, shall forthwith become and be liable under this mortgage as if the same had been originally included herein, and the net proceeds of real estate so released (if sold) shall be applied by the party of the first part, in good faith, to the betterment or extension of the plants owned or controlled by it.

NUMBER TWO (2). That the party of the first part its successors and assigns, shall and will, on demand, in writing, of the party of the second part, at any time, make, do, execute,

acknowledge and deliver all such further acts, deeds and assurances in the law as may be reasonably advised or required of it for effectuating the intention of these presents and for the better assuring and confirming unto the party of the second part and its successors upon the trusts and for the purposes herein expressed, all and singularly, the property, appurtenances and rights hereby mortgaged, whether now owned or possessed or hereafter acquired by said party of the first part, its successors and assigns.

WHEREAS THEREOF (3). That the party of the first part shall not apply for or claim any deduction by reason of this mortgage from the taxable value of the lands and real estate embraced in this mortgage, and that, until the bonds hereby secured be fully paid and satisfied, the party of the first part shall and will, from time to time, as the same shall become due and payable, pay, or cause to be paid, to the person or persons authorized to collect and receive the same, all taxes, assessments and other impositions which may, at any time hereafter, be lawfully assessed, levied, imposed or charged upon the said lands and premises and property, or any part thereof, payable by them respectively, or upon the party of the first part in respect thereof, and shall and will pay the principal and interest on the bonds secured by this mortgage without deduction for any tax or taxes that may be hereafter imposed thereon or on this mortgage by the laws of the State of New Jersey for state or municipal purposes, or by the laws of the United States for national purposes, which the said party of the first part may be required by the laws of said State or of the United States to retain therefrom; and shall and will, when thereunto requested, provide and show to the party of the second part proper receipts and vouchers therefor; and that it will not suffer any judgment, lien or execution to remain outstanding upon, or

to be levied upon, any of its property, whereby the lien hereof might or could be impaired, or in any manner render itself liable to any suit or proceedings for dissolution, or proceedings in bankruptcy or insolvency. The party of the first part shall and will, also, and at all times, so long as any of the bonds hereby secured are outstanding and unpaid, keep the buildings, machinery and appurtenances, and all perishable personal property, hereby mortgaged or intended so to be, fully insured in and by responsible insurance companies, against loss or damage by fire, explosion or by the elements, and pay all premiums upon the insurance policies; all losses, if any, under any such policies of insurance, to be payable to the party of the second part hereunder for the benefit of the several holders of the bonds hereby secured, and may be used by or with the consent of said party of the second part in repairing or replacing the property so damaged or destroyed, or expended for the betterment of the plants.

NUMBER FOUR (4). If the party of the first part, its successors or assigns, shall at any time hereafter make default or refuse or neglect or omit, for three months after the same shall fall due and be demanded, to pay any half yearly instalment of interest payable upon the bonds, or any of them, intended to be hereby secured, or shall make default, or refuse, neglect or omit, for three months after the same shall fall due and be demanded, to pay the principal sum of each and all of said bonds, or shall fail to pay within three months after the same shall become legally due and payable by it all taxes, rates, levies, assessments and liens above mentioned, or shall claim or apply for any deduction from the taxable value of the lands and premises or personal property embraced in this mortgage, or any part thereof, then, and in either such case, the party of the second part, personally or by its attorney or

attorneys, agent or agents, may forthwith enter into and upon and take possession and control of all and singular the properties, rights and premises herein expressed to be hereby mortgaged, with all the records, books, papers and accounts of the party of the first part and each and every part thereof, and exclude the said party of the first part and its agents wholly therefrom, and have, hold and use the same, operating by its superintendents, managers, agents, receivers, servants, or other agents or attorneys, the said manufacturing plant and business, and conducting the business and operations thereof, and making from time to time all repairs and replacements and such useful additions, alterations and improvements thereto and thereof as to the party of the second part may seem judicious, and collect and receive all earnings, profits, revenues and income of the same and every part thereof, and, after deducting the expense of operating the said works and conducting said business, and all the said repairs, replacements, additions, alterations and improvements, and all payments which may be made for taxes and assessments, charges and other liens prior to the lien of these presents upon the said lands, property or premises, or any part thereof, as well as a just compensation to the party of the second part, its agents, attorneys and counsel, shall apply the remainder of the moneys so received by them as follows: In case the principal moneys secured by such bonds shall not have become due to the payment of the interest remaining in default in the order of the maturity of the instalments of such interest; in case the said principal moneys or any of them shall have become due, to the payment of the principal and accrued interest upon such bonds, the principal moneys of which shall have become due, pro rata, without any preference or priority whatever.

NUMBER FIVE (5) In case two successive defaults shall

be made in the payment of any instalment of interest upon the bonds secured hereby, or any of them, or if two defaults, although not successive, in such payments shall exist at the same time, either by the party of the first part or by the party of the second part, in possession under the provisions of the last preceding paragraph, or in case the party of the first part shall claim or apply for any deduction from the taxable value of the lands and premises or personal property embraced in this mortgage, or any part thereof, or in case the party of the first part shall make default in the performance of any of the other provisions of these presents, then, and in such case, if the holders of one-third in value of the outstanding bonds hereby secured shall so elect, in writing, the whole principal of all the bonds hereby secured shall thereupon be declared by the party of the second part to be, and shall immediately become due and payable, and it shall be the duty of the party of the second part, upon request in writing, signed by the holders of one-third in value of said bonds then outstanding, and upon being indemnified to its satisfaction, to institute proper proceedings at law or in equity to enforce the lien hereby created, and cause the said property to be taken in execution and sold under proper process for the payment of the debt, principal and interest hereby secured, or the party of the second part may, upon the like request and indemnity, enter upon and take possession of all of said property, real and personal, rights and good will herein expressed to be hereby mortgaged, and proceed to sell the same, or so much thereof as may be necessary, to the highest and best bidder at public sale at the Court House in the said City of Newark, first having given at least four weeks notice of the time, place and terms of such intended sale by publication of such notice once a week during said four weeks in at least one newspaper of

general circulation, published in each of the following cities, viz: in the City of New York and the City of Philadelphia, and upon such sale shall, by proper assurance in law, convey, transfer and deliver possession of the property, real and personal, rights and good will so sold, to the purchaser or purchasers, freed and discharged from the trusts hereby created; which sale or sales shall be a perpetual bar, both in law and in equity, against the party of the first part and its successors, and all persons and corporations lawfully claiming, or to claim, by, through, or under it; and upon the making of any such sale the party of the second part shall apply the proceeds of such sale or sales, as follows, to wit: First, to the payment of the costs and expenses of such sales, including a reasonable compensation to the party of the second part, its agents, attorneys and counsel, and all expenses, liabilities and advances made and incurred by the party of the second part in managing and maintaining the works, equipment and other property herein expressed to be mortgaged, and all taxes, assessments and liens prior to the lien of these presents; second, to the payment of the whole amount of principal and interest which shall then be owing or unpaid upon the said bonds, or any of them, whether the said principal be then due or yet to become due; and, in case of the insufficiency of such proceeds to pay in full the whole amount of principal and interest owing or unpaid upon the said bonds, they shall be paid ratably in proportion to the amounts owing and unpaid upon them respectively, without preference of one bond over any of the others; Third, to pay over the surplus, if any, on demand, to whomever may be lawfully entitled to receive the same by the judgment of some court of competent jurisdiction.

NUMBER SIX (6) It is hereby declared and agreed by and between the parties hereto that it shall be the duty of,

and it is hereby made obligatory upon, the party of the second part, on being requested as to do, in manner as hereinafter provided, by the holder or holders of one-third in value of the bonds at the time outstanding and on being indemnified to their satisfaction, to take all needful steps which may be requisite to protect the rights of the holders of bonds secured hereby.

The requests hereby provided for shall be by an instrument or concurrent instruments in writing, signed by such bond holder or bond holders, or by his or their attorney or attorneys in fact, duly authorized for that purpose, and upon such requests (accompanied by indemnity to the satisfaction of the party of the second part as aforesaid) the party of the second part shall proceed forthwith to enforce the rights of the party of the second part and of the bondholders under these presents, by sale or entry, or both, or by judicial proceedings, according to such requisitions; provided that in the meantime, and until such requisition by one-third of the bond holders shall have been made as above provided, the party of the second part shall have full power and authority to commence and prosecute such proceedings at law or in equity, from time to time, as they may deem necessary or proper for the due protection or enforcement of the rights of the bondholders or any of them under these presents.

SECTION SEVEN (7). Upon a filing of a bill in equity, or other commencement of judicial proceedings to enforce the rights of the party of the second part and of the bondholders under these presents, the party of the second part shall be entitled to the appointment by any court of competent jurisdiction of a receiver or receivers of the property hereby mortgaged, and of the earnings, income, rents, issues and profits thereof, pending such proceedings, with such powers as the court making such appointment shall confer, (including the power to issue receiver's certificates, the lien of which shall be prior to the lien

of this mortgage).

NINTH EIGHT (8) The party of the second part say, and upon the request of the party of the first part, and upon receiving all reimbursement and compensation to which it may be entitled, shall cancel and discharge the lien of these presents, and execute and deliver to the party of the first part such deeds of discharge as shall be requisite to discharge the lien hereof, and reconvey to or regrant in the party of the first part the estate and title hereby conveyed or intended to be whenever all the bonds and coupons secured hereby, which shall have been duly issued, shall be paid and cancelled or destroyed; which cancellation or destruction shall take place in the presence of representatives, duly appointed, on behalf of the party of the first part and of the party of the second part, and, upon receiving their certification of the fact, it shall be the duty of the party of the second part to discharge said lien of record. And if, at any time the party of the first part shall become the holder and owner of all said bonds and shall present the same to the party of the second part and request their cancellation and the discharge of the lien of these presents, the party of the second part, upon proper reimbursement and compensation as aforesaid, shall cancel or destroy the same in the manner above in this article provided, and shall discharge said lien of record.

NINTH NINE (9) And it is hereby understood and agreed and this trust is accepted upon the express condition that the party of the second part shall not incur any liability or responsibility whatever in consequence of permitting or suffering the party of the first part to retain or be in possession of the estate and premises hereby mortgaged, or agreed or intended so to be, or any part thereof, and to use

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file
TO THE STOCKHOLDERS OF THE EDISON STORAGE BATTERY CO. *142*

After the incorporation of the company in May, 1901, considerable experimental work was required in connection with the development of the battery, so that actual commercial manufacture was not started until January, 1903, at the plant in Glen Ridge, which had been purchased for the purpose. Subsequently the Glen Ridge plant was shut down and a new up-to-date and very much larger factory was constructed at Orange. Some difficulty was experienced in connection with the cells which were put out, due to the fact that leaks developed in the cans, but this was overcome by providing the cans with welded seams. Actual commercial experience developed the fact that the Type "B" cells made at the Glen Ridge plant showed a loss of capacity due to the swelling of the pockets in the positive plates, and because of this trouble the Glen Ridge plant was shut down on November 1, 1904, at which time we were turning out about 200 cells per week. Up to the time of that shut-down we had manufactured the equivalent of 37,068 "B-18" cells and the equivalent of 18,980 "E-18" cells replacement. A replacement cell is one in which we use everything of the old cell except the positive plate, the customers returning the old cells to us. From November, 1904, until October, 1908, experiments have been continuously made, and the difficulty of the swelling of the pockets in the positive plates is believed to have been overcome by the use of cylindrical tubes instead of flat pockets. By this change I have every reason to believe that the life of the new cell will be from two to three times that of the old type "B" cell, while the average life of the "E" type cell in commercial vehicles operated by firms having a large number of vehicles in use has been from two to three years, depending on the care

(2)

the batteries have received. The manufacture of the new battery is being actively prosecuted and the outlook for the business is good, since there is undoubtedly an enormous field for storage batteries outside of trucks and vehicles--fields that may be added where the lead battery has failed completely, such as our-lighting, marine launches, submarine work, street cars and sparking batteries for gasoline engines.

At the present time we have over 250 commercial delivery wagons operated with Edison batteries of the old type and in every instance the user has obtained better results than could possibly have been secured from the lead cell. Some of the prominent users of the Edison batteries in New York City are the following:

Adams Express Co.	Geo. Rhret Brewery
United States Express Co.	New York Telephone Co.
Tiffany & Co.	Lewandos French Dyeing & Cleansing Co.
R. H. Macy & Co.	A. G. Hyde & Co.
W. & J. Gloane	New York Dock Co.
James A. Hearn & Son	Twentieth Century Auto Touring Co.
A. A. Vantine & Co.	Firestone Tire & Rubber Co.
Aitken Son & Co.	Lidgerwood Mfg. Co.

A considerable ^{number} of automobile manufacturers have signified their intention to adopt the Edison battery as soon as we are in position to furnish them, and among these prospective users are the following:

General Vehicle Co.	Detroit Electric Co.
Commercial Truck Co.	Rausch & Lang Carriage Co.
Studebaker Automobile Co.	Champion Wagon Co.
Baker Motor Vehicle Co.	Pittsburgh Motor Vehicle Co.

(2)

Waverly Automobile Co.	Oliver P. Fritchle, Denver, Col.
Couple Gear Freight Wheel Co.	Woods Motor Vehicle Co., Chicago
S. R. Bailey & Co.	Anderson Carriage Co., Milwaukee
Columbus Buggy Co.	James McNaughton Co.

In conclusion I wish to impress upon the stockholders the fact that practically all the work that has so far been done has been experimental in character, but I believe the results which will be achieved will more than justify the expense and that the Edison battery will be a very great commercial success.

Respectfully submitted.

President.

ESBC - Bonds
THOMAS A. EDISON
President

FRANK L. DYER
Vice-President and General Counsel

E. G. DODGE
General Manager

H. F. MILLER
Secretary-Treasurer

EDISON STORAGE BATTERY CO.

Telephone, 908 Orange

ORANGE, NEW JERSEY July 21, 1910.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir:-

*Having
Kept me from
going away
Thurs. 5
JUL 22 1910*

A special meeting of the Stockholders of the Edison Storage Battery Company will be held July 27th, 1910, at the office of the Company, Lakeside Ave. & Valley Road, West Orange, New Jersey, at 11 A. M., for the purpose of determining a method for liquidating the account of Thomas A. Edison with this Company, and for such other matters as may be brought before the meeting.

Yours truly,

H. F. Miller
Secretary.

*Submitted to Stockholders
at meeting July 24th 1910 H. F. Miller*

TO THE STOCKHOLDERS OF THE EDISON STORAGE BATTERY COMPANY:

Secretary

The essential purpose of the present meeting is to discuss ways and means for the liquidation of Mr. Edison's account against the Edison Storage Battery Company and to agree upon a plan for doing so.

Mr. Edison personally controls more than 75% of the capital stock of the company and could therefore decide the question himself, and his decision in the matter could be questioned only in case of fraud. Nevertheless, he desires to have the situation laid before all of the stockholders in order that he may have the benefit of their advice even though in justice to himself he may not be able to agree with their views. The stockholders may, however, be reminded of the fact that all of the outside stock, ^{except 500 shares} amounting to 25% of the total, was presented by Mr. Edison as a bonus in connection with the sale of the bonds of the company and does not represent money invested, at least by the original outside stockholders. So far as the bonds of the Company are concerned, knowing as we do the perfected condition of the Edison battery and the great demand it must inevitably have, there is no reason for the slightest uneasiness or doubt as to the value of these securities.

The experimental development of the Edison Storage Battery involved such enormous difficulties that if Mr. Edison had had any idea as to their extent he probably would not have undertaken the work. When the original bond issue was made, by which a cash capital of \$500,000 was provided, Mr. Edison felt confident that that capital would be sufficient to conduct all

(2)

experiments and put the battery on the market as a commercial proposition. It is not necessary to refer to the extent of these experiments except to say that they numbered many thousands. As is well known, the first form of battery that was put on the market developed defects which were not anticipated, and, although that battery was superior to any competing device, it did not realize Mr. Edison's expectations, and it was therefore withdrawn and its manufacture stopped, except to the extent of making replacements. Following the withdrawal of the first type of battery from the market, a greater number of experiments were made, resulting in the production of the present perfected Edison Battery, which has now been manufactured and sold for about a year and which has more than realized Mr. Edison's most ardent hopes. The introduction of the new battery has no doubt been somewhat affected by the unfortunate experience with the earlier type; and by the very vigorous and in some cases questionable methods of the Lead Battery people to prevent its introduction. Furthermore, most of the electric vehicles made in this country were especially designed for lead batteries and required modifications to fit them most effectively for Edison batteries; and, finally, we found that many of the vehicle manufacturers were bound by contracts to use lead batteries only, but these contracts are now expiring and none, we believe, runs beyond the present year. I am glad to say, however, that the demand for the new battery is slowly increasing, electric vehicle manufacturers and other users are recognizing its merits and are designing their present models for its use. At the present time the output of the factory is equivalent to about 150 A-4 cells per day, all of which are being sold, and the interest

(3)

which is being manifested on all sides in the battery convinces us that the demand will very largely increase within a short time. Even at the rate of 150 A-4 cells per day, the factory is almost able to pay its operating and selling expenses, including the cost of manufacture, so that with an increase in the business profitable results may be expected.

At the present time, therefore, the situation of the Edison Storage Battery Company is that it is in possession of a perfected storage battery with all the patents thereon, with secret processes at its command and with a tremendous experience that has been acquired during the past nine years together also with a plant fully equipped to turn out the batteries at a sufficient rate to make the business a profitable one as soon as the demand slightly increases. As to the ultimate success of the enterprise we do not entertain the slightest doubt.

The expense in connection with the development of the perfected battery up to the present point, including experiments and plant with its equipment and for carrying on the business since the introduction of the battery about a year ago, has been upwards of \$2,500,000, as appears from the report of Messrs. Lybrand, Ross Bros. & Montgomery, certified public accountants, for the year ending February 28, 1910. On that date the Edison Storage Battery Company owed Mr. Edison \$1,544,743.29 on open account for money advanced by Mr. Edison to carry the enterprise on and eventually to realize something for the stockholders. Since that date the amount has increased somewhat, so that on June 30, 1910, with interest, it was \$1,908,276.86. The question now for consideration is, how shall this account be liquidated? Two plans have been suggested tentatively by Mr.

(4)

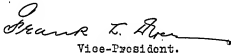
Edison, either one of which he is willing to accept.

(1) The Company might give interest bearing notes to Mr. Edison for the amount of the indebtedness, payable in two or three years from date.

(2) The capital stock of the Company might be increased by an additional issue of \$2,500,000 and his debt liquidated by paying stock at par.

He put these plans before the stockholders in order that they ~~may~~ be discussed by them.

Respectfully submitted,


Vice-President.

FLR/T

ESBC - Bond

THOMAS A. EDISON
President

FRANK L. DYER
Vice-President and General Counsel

E. G. DODGE
General Manager

H. F. MILLER
Secretary-Treasurer

EDISON STORAGE BATTERY CO.

Telephone, 908 Orange

Harry
ORANGE, NEW JERSEY

September 22, 1910

*Thos. A. Edison Esq.
Orange N.J.*

*I don't understand this
we already had the
meeting -*

The Board of Directors of the Edison Storage Battery Company,
a corporation of New Jersey, on the 16th day of September, 1910, do hereby
resolve and declare that it is advisable that the capital stock of said
company be increased from \$1,000,000 to \$3,500,000, said additional stock
to be like in all respects the present stock of said company. And they
hereby call a meeting of the stockholders to be held at the company's office,
corner of Valley Road and Lakeview Avenue, West Orange, N. J., on Tuesday,
the 4th day of October, 1910, at eleven o'clock A. M., to take action upon the
above resolution.

Attest

H. F. Miller

Secretary.

[ATTACHMENT]

Mr Edison

We held a meeting of stockholders on July 27th to give them an opportunity to decide which of two plans for settling your account was the most desirable and they chose to give you stock at par for your claim authorizing the officers to increase the Capital stock from \$1,000,000 to \$3,500,000 for that purpose.

Then the directors met Sept 16th to carry out the instructions of the stockholders and having done so the laws of New Jersey require that the stockholders confirm the action of the directors. As I understand it this final meeting is to make the transaction legal i.e. in accordance with the statutes.

H. F. M.

[CA. 1911]

THOMAS A. EDISON
President

FRANK L. DYER
Vice-President and General Counsel

E. G. DODGE
General Manager

H. F. MILLER
Secretary-Treasurer

EDISON STORAGE BATTERY CO.

Telephone, 908 Orange.

ORANGE, NEW JERSEY

In your reply please refer to

File No. _____

Mr. C. E. Nester,
Shreve Building,
San Francisco, Calif.

RE: HANDLING THE EDISON BATTERY ON THE
PACIFIC COAST.

Dear Sir:

It is against Mr. Edison's policy to grant the exclusive right to anyone to handle any of his products in any particular territory. We would, however, allow you to handle the Edison battery ~~as the Pacific Coast~~ ^{in California} and, so long as you gave the business your personal attention, and pushed it hard in other words, being a live wire and showing results, we will refrain from looking for someone else, or allowing anyone else, to handle it in that territory.

If you buy automobiles and chassis suitable and fitted for Edison batteries, but without the battery equipment, we will allow you 20% discount from the list prices, with an additional ~~25%~~ ^{10%} cash in ten days, f.o.b. Orange, N.J., with the understanding that you always carry a suitable stock of each size of cell in San Francisco; and that you also try to replace lead batteries in automobiles now being operated ~~xxx~~ on the Coast.

The above arrangement does not refer to the sparking battery. This being an accessory we feel that any garage or supply house should have the privilege of carrying them in stock if they wish to do so.

Any inquiries we receive from the ~~Pacific Coast~~ ^{California} ~~for new work~~ ^{as long as we are satisfied you} the "A" type of cells we will refer to you ~~this territory~~ ^{California} ~~is to extend as far south as Los Angeles for the time being.~~ ^{to us}

Very truly yours,
EDISON STORAGE BATTERY COMPANY

WGB:HRL

MANAGER OF SALES.

This agreement entered into this *Ten*th day of *January*, 1912, by and between the Hartford Electric Light Company, a Connecticut corporation; The General Vehicle Company, a New York corporation; and the Edison Storage Battery Company, a New Jersey corporation; hereinafter referred to as the Light Company, the Vehicle Company and the Battery Company, respectively, WITNESSETH:

WHEREAS, the Light Company is in the business of generating and selling electric current to the public; the Vehicle Company is in the business of making and selling electric vehicles; and the Battery Company is in the business of making and selling electrical storage batteries, covered by letters patent of the United States; and

WHEREAS, it is believed by all the parties hereto that the general adoption of the electric vehicle for purposes of transportation would be greatly facilitated, (a) if the purchaser's initial investment is reduced to a minimum, and (b) if the purchaser can be relieved of the battery charging and of the care of the battery for such vehicles; and

WHEREAS, the parties hereto also believe that the above purpose can be realized under the following arrangement, namely:

- 1 - By offering to the public, at a price minus the charge for the battery, a class of electric vehicles especially designed to be operated by a certain type of storage battery, thereby reducing the purchaser's investment to a minimum;
- 2 - By supplying for such vehicles, and installing therein, their proper equipment of charged storage batteries, on the basis of a charge for the service rendered, thus relieving the purchaser of the necessity of maintaining and charging said batteries; and

WHEREAS, the Vehicle Company, with the view of increasing its business, has designed and is willing to construct and sell

as executed by Mr. Edison -

to the public, minus the battery, a line of electrical vehicles for business purposes especially designed, electrically and mechanically, to be operated by the Edison storage battery; and so arranged that the battery equipment thereof can be exchanged in a few minutes; and

WHEREAS, a plan has been proposed for an "Edison Battery-Service System," in the City of Hartford, whereby the users of vehicles so constructed as aforesaid may obtain from the Light Company the continuous use of Edison storage battery equipment, paying therefor on the basis of service rendered, the Light Company owning, charging and maintaining a stock of such batteries and exchanging discharged or partly discharged sets of batteries for charged ones as the exigencies of the business may require; and

WHEREAS, the Light Company is desirous of encouraging the use of such vehicles in the City of Hartford by means of the Edison Battery-Service System, and to this end is willing to establish and operate a special department for the sale of its current for operating such electric vehicles by means of the Edison Battery-Service System, and for this purpose to carry a stock of such batteries, the same to be owned, charged, maintained and exchanged as aforesaid by the Light Company, if it can be assured of exclusive rights in regard thereto in the City of Hartford; and

WHEREAS, the Battery Company is desirous of facilitating the inauguration of such a system for the purpose of advancing the adoption of electric vehicle transportation, especially for the reason that in such a system its batteries would be in the hands of experts, and because the Vehicle Company has improved the electrical and mechanical parts of its vehicles to adapt them especially for using the Edison storage battery; and

WHEREAS, the Battery Company, in view of those facts is willing to grant to the Light Company the exclusive license for the City of Hartford for the use of the Edison Storage Battery in the

manner above contemplated, provided that such batteries as the Light Company shall purchase from time to time be continuously owned and rented by the Light Company and used only in the vehicles made as aforesaid by the Vehicle Company, and in such vehicles made by others and not operated for business purposes, in which the Battery Company may authorize the Light Company to use the same.

NOW, in consideration of the promises, and in further consideration of the sum of One Dollar in hand paid by each of the parties hereto to the other, the receipt of which is hereby acknowledged, the parties hereto hereby mutually agree with each other as follows, to wit:

FIRST: That the Vehicle Company will manufacture a line of electrically driven commercial vehicles, that is, vehicles to be used for business purposes, especially designed and adapted electrically and mechanically, to be operated with the Edison storage battery as it is made at the date of this agreement, it being understood that the design of such vehicles shall include such special and necessary mechanical and electrical appliances and arrangements for carrying the batteries and to facilitate connecting and disconnecting them, and to facilitate loading and unloading the same as will enable such vehicles to be readily and rapidly equipped with batteries by the Light Company in the manner herein contemplated; it being further understood that the Vehicle Company will equip its vehicles with the electric and mechanical appliances specified in Schedule A, hereto annexed.

SECOND: The Battery Company will, in connection with the sale of its batteries to the Light Company under this agreement, make a guarantee in the attached form, which guarantee shall be effective and binding only in regard to batteries used in vehicles constructed by the Vehicle Company in accordance with the provisions of the next preceding section, and also if the Light Company charges and maintains the batteries according to the instructions of the

Battery Company, and also if such batteries are used only in the said vehicles made by the Vehicle Company, it being understood that the controlling consideration hereof, (without which neither this agreement nor guarantee would have been entered into or given by the Battery Company) is the fact that the Vehicle Company has designed its vehicles to especially adapt them electrically and mechanically to the use of the Edison battery, which design has been approved by the Battery Company.

THIRD: The Vehicle Company, when selling its vehicles without battery as herein contemplated for use in the City of Hartford, agrees to sell the same at prices which shall be as low as the equivalent of its regular complete-unit prices for such vehicles as they may be from time to time minus the price at which the proper equipment of battery is included in such complete price in each case, it being understood that the Vehicle Company will use diligence and continuous endeavor to introduce and sell its said vehicles in Hartford for the use and operation in the manner above intimated.

FOURTH: The Vehicle Company is not hereby deprived of nor limited in its right to sell in Hartford, or elsewhere, its vehicles without batteries, or complete with batteries, nor to purchase, use and sell batteries other than those of the Battery Company, but it agrees to advocate only Edison batteries for use on a Battery-Service System in the City of Hartford.

FIFTH: The Battery Company agrees to license and does hereby grant to the Light Company an exclusive license under its patents and patents to issue on pending applications to use the Edison storage battery within the limits of the City of Hartford, State of Connecticut, for the purpose of conducting a business of selling current to operate the said electric vehicles of the Vehicle Company through the medium of said Edison Battery-Service System as contemplated in this agreement.

SIXTH: The exclusive license hereby granted to the Light Company is granted on the following conditions, which are hereby accepted by the Light Company, namely:

(1) That the Edison Storage Battery shall be installed and used as aforesaid only on such electric vehicles made by the Vehicle Company, but the Vehicle Company consents to the extension of this license by the Battery Company so as to permit the Light Company to use said batteries on electric vehicles made by others and not operated for business purposes.

(2) That the Light Company shall continuously own, charge and maintain the batteries purchased by it under this agreement for conducting said business.

(3) That the Light Company shall erect, utilize or rent proper buildings for the conduct of said business, and shall furnish the same with all such facilities for the charging and exchanging of said batteries as the nature of the business shall demand in order to carry out the intent of this agreement, and it agrees that it shall charge and exchange and lease said batteries as herein contemplated.

(4) That the Light Company shall purchase from the Battery Company from time to time at prices equal to list price less 15% discount, a sufficient quantity of said vehicle storage batteries to enable it to fully supply the demand for current for said batteries operated on said system in said vehicles; and also agrees to supply such a demand; and shall exercise due diligence in caring for and maintaining such batteries in the manner stated in the instructions of the Battery Company and according to any additional reasonable instructions hereafter issued by the Battery Company and delivered to the Light Company, to the end

that the Battery Company shall not suffer damage by neglect or carelessness or be thereby prevented from carrying out its guarantee as to the life of the batteries. The Battery Company agrees that at all times the cash sale price of a new vehicle-battery, as distinguished from an exchange transaction, shall be 8 $\frac{1}{2}$ % less than that at which the Battery Company regularly sells vehicle-batteries to Central Stations, Power Companies, or Garages for other uses than the Edison Battery-Service System.

(5) That during the continuance of this agreement, and so long as the Battery Company shall fulfill the guarantee above given, the Light Company shall not sell its current for operating electric vehicles in the manner herein contemplated, that is, by a Battery-Service System, except through the Edison Storage Battery and in vehicles made by the Vehicle Company, and in such vehicles made by others and not operated for business purposes, in which the Battery Company may authorize the Light Company to use the same; it being understood, however, that nothing herein contained shall be construed to prevent the Light Company from selling its current to charge any storage batteries in vehicles of any kinds and makes, where such batteries are not operated on a Battery Service System.

It being also understood that nothing herein contained shall be construed to prevent the Light Company from selling its current at its regular rates to any customer who demands the same in accordance with the terms of the company's franchise, and under the laws of the State of Connecticut.

(6) That the Light Company shall inaugurate the said business within sixty days from the date hereof or as soon as there shall exist, or the Light Company can create, a demand for said service.

SEVENTH: The Battery Company reserves to itself the right to sell its batteries to any manufacturer of electric ve-

hicles to be sold with such vehicles to the public in open market, but it hereby agrees not to sell its batteries to any person or Company other than the Light Company, for the purpose of selling current to the public in Hartford through such batteries for operating vehicles as contemplated herein, this particular class of business in said City of Hartford; namely, the Edison Battery-Service System, being hereby exclusively licensed to the Light Company during the continuance of this agreement.

EIGHTH: WHEREAS, the Battery Company may hereafter grant to others than the Light Company similar licenses for use of its storage battery for the "Edison Battery-Service System" in other cities; and

WHEREAS, vehicles made by the Vehicle Company and equipped by such other licensees may in the course of travel be passing through Hartford and require renewal of charged battery equipment.

It is understood and agreed that in such cases the Light Company shall have the privilege, in its discretion, to make the necessary exchange of Edison battery equipment in any such vehicles, and in doing so shall not be deemed to have violated any provision of this agreement.

NINTH: Unless sooner terminated by mutual consent of all the parties hereto, this agreement and license shall remain in force for the period of five years from date hereof, and shall continue thereafter from year to year unless written notice of cancellation shall be given by any one of the parties hereto to the other parties at least ninety days before the expiration of any yearly period; if such notice is given this agreement shall terminate at the expiration of the yearly period next following the date of the notice and if thereafter the Light Company uses the batteries purchased hereunder, in vehicles other than those made by the Vehicle Company or in a manner other than that specified in the Battery

Company's instructions the guarantee as to life, above referred to, shall terminate.

TENTH: This agreement is binding upon and shall endure to the benefit of the parties hereto and their several successors in business.

ELEVENTH: The territory referred to herein as the "City of Hartford" shall be construed to include all cities or towns to which the Light Company, at present or during the life of this agreement, supplies current through its circuits for lighting and power purposes, provided that no cities nor towns, in which there shall have been granted to others, rights similar to those herein granted, shall be included within this contract.

The territory now included consists of the following cities or towns:

Hartford; East Hartford; West Hartford; Bloomfield; Tariffville; East Granby; Simsbury; Windsor; Burnside; Wethersfield; and Rocky Hill; all of the above in the State of Connecticut.

IN WITNESS WHEREOF, the parties hereto have respectively caused these presents to be executed and their respective corporate seals to be hereunto attached by their proper officers thereunto duly authorized.

ELSON STORAGE BATTERY COMPANY,

By

Witness:

HARTFORD ELECTRIC LIGHT COMPANY,

By

Witness:

GENERAL VEHICLE COMPANY,

By

Witness:

S C H E D U L E "A"

FIRST: The special trucks for the Battery-Service System shall be so constructed and provided with such fittings that the batteries can be put in or taken from the vehicles without disturbing the individual units, to the end that the great number of removals over the guaranteed life will not tend to injure the battery mechanically.

SECOND: The truck when fully loaded and moving on a six percent (6%) grade shall not have a greater drop of voltage on the wiring carrying the current than two and one-half (2-1/2) volts with a sixty (60) cell battery.

THIRD: The battery box shall be so constructed that it will be closed in the winter to prevent low temperature from affecting the discharge rate of the battery.

EDISON STORAGE BATTERY COMPANY GUARANTEE
Under EDISON BATTERY-SERVICE SYSTEM.

The Edison Storage Battery Company agrees to and hereby does guarantee all Edison Storage Batteries furnished the Light Company under the terms of this agreement, as follows; provided that the batteries and the renewals thereof herein mentioned are used exclusively in vehicles manufactured by the General Vehicle Company, Long Island City, N. Y.; and provided that the batteries are operated by the Light Company in accordance with the instructions furnished by the Edison Storage Battery Company.

The Battery Company guarantees that the life of any battery with one renewal thereof shall be ten years.

The price of the original battery shall be the price determined by the contract - the price of renewals shall be list price, less 25% discount. In case a second renewal is required, the probable excess of life over the ten-year period shall be estimated based on the average life of the original battery and first renewal, and the Light Company shall pay the Battery Company for such estimated excess life on a pro rata basis.

On making renewals, all old batteries or battery material shall be the property of the Edison Storage Battery Company. All prices f.o.b. factory.

This guarantee excludes all renewals required by reason of accident, misuse, or abuse. All expense of maintaining crates and the renewal of electrolyte is also excluded from this guarantee.

It is agreed that the Edison Battery Company shall have the opportunity to inspect the batteries at all reasonable times.

This guarantee is contingent upon conditions of credit being satisfactory at all times.

No battery is to be renewed hereunder until its capacity has fallen to a point where it is incapable of giving ninety per cent. (90%) of its rated capacity in kilowatt hours.

The rated kilowatt hour capacity of each cell is given below:

A - 4	-----	.180 K.W.H.
A - 6	-----	.270 K.W.H.
A - 8	-----	.360 K.W.H.
A - 10	-----	.450 K.W.H.
A - 12	-----	.540 K.W.H.

THOMAS A. EDISON
President

FRANK L. DYER
Vice-President and General Counsel

Walter A. Wood
~~Walter A. Wood~~
General Manager

H. F. MILLER
Secretary-Treasurer

EDISON STORAGE BATTERY CO.

Telephone, 902 Orange

ORANGE, NEW JERSEY May 16th, 1912

The Lansden Company,
Newark, N. J.

Gentlemen:-

In accordance with the understanding at which we arrived at our meeting this day, we have entered your order for your full requirements of Edison Storage Batteries for your trucks covering a period of five years from this date, at list prices for such batteries less twenty per cent (20%) discount, with an extra two per cent (2%) for cash within ten days.

Should your purchases in any one year exceed an aggregate of one hundred and twenty (120) cells of type A-6, or their equivalent in price, per working day, you are to have an extra two and one-half per cent ($2\frac{1}{2}\%$) discount, irrespective of the cash discount, that is to say, the discounts would be 20% and $2\frac{1}{2}\%$, with 2% for cash within ten days. It being understood that if your purchases in the first year are less than an aggregate of one hundred and twenty (120) cells of type A-6, or their equivalent in price, per working day, we will still give you this extra two and one-half per cent ($2\frac{1}{2}\%$) discount, but this exception applies only to the first year of this arrangement.

L. Co.

(2)

May 16/18

Should your purchases in any one year exceed an aggregate of two hundred and forty (240) cells of type A-6, or their equivalent in price, per working day, you are to have a discount of five per cent (5%) in addition to the regular discount of twenty percent (20%). In this case the discount would be 20% and 5%, with an extra 2% for cash within ten days.

We agree that we will fill orders equally for all users, and give no one an advantage. In any event we will not give to other makers of trucks a better price than you receive for batteries with which such trucks are sold.

If you decide to abandon the use of Edison Storage Batteries, you are to give us six calendar months' notice of your intention to do so.

In order that we may be aided in carrying out our guarantee as to life of batteries, it is understood that your trucks, in which the battery is to be used, shall be properly motored, and that the battery boxes shall be so constructed that our instructions can be readily carried out by the user.

Yours very truly,

THE EDISON STORAGE BATTERY CO.

Thomas A Edison

PRESIDENT.

TAE/ES

Accepted:

The Standard Co.

by

Robert Schuster
M. L. Case
President
and Mgr

[ATTACHMENT]

11000 MEADOW CROFT.
See *See*
Bachman & Bee

If you approve of
this, send it down
& have the Co
accept it —
The president to
sign for the Co —
a witness

7/1/97



CABLE ADDRESS: "LANSDENCO, NEWARK"

THE LANSDEN COMPANY
MANUFACTURERS OF
Electric Commercial Vehicles

TRUCKS AND WAGONS FOR EVERY SERVICE
EDISON STORAGE BATTERY EQUIPMENT

NEWARK, N. J., U. S. A.

May 18, 1912

Mr. W. G. Bee, Mgr. of Sales,
Edison Storage Battery Co.,
Orange, N. J.

MAY 20 1912

Dear Sir:

Accept our thanks for yours of the 17th, enclosing
your Company's agreement covering our requirements for
Edison Storage Batteries for the next five years.

We appreciate the consideration extended us in
this regard, and we believe it will prove to the mutual
advantage of all concerned.

Yours very truly,

THE LANSDEN COMPANY

W. L. Case
General Manager

WLC/SS

*Enclosed is Copy of
Agreement as accepted
by us - duly signed
W. L. Case*

THOMAS A. EDISON,
CHAIRMAN, BOARD OF DIRECTORS



FRANK L. DYER,
PRESIDENT

Thomas A. Edison, Inc.
Orange, N.J., U.S.A.

Edison Phonographs and Records
Edison Primary Batteries
Edison Kinetoscopes and Motion Picture Films
Edison Dictating Machines
Edison Home Kinetoscopes and
Motion Picture Films

LONDON
PARIS
BERLIN
SYDNEY
BUENOS AIRES

CABLE ADDRESS
"ZYMOTIC, NEW YORK"

November 9, 1912.

To the Directors of
Edison Storage Battery Company,
Orange, N. J.

Gentlemen:

I hereby resign as Vice-President of the Edison
Storage Battery Company, to take effect immediately.

Yours very truly,

FLD/IWW

Frank L. Dyer

*Abolish the office of
Vice President,*

THOMAS A. EDISON,
CHAIRMAN BOARD OF DIRECTORS



FRANK L. DYER,
PRESIDENT

Thomas A. Edison, Inc.
Orange, N.J., U.S.A.

Edison Phonographs and Records
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Edison Home Kinetoscopes and
Motion Picture Films

LONDON
PARIS
BERLIN
SYDNEY
BUENOS AIRES

CABLE ADDRESS
"ZYMOTIC, NEW YORK"

November 9, 1912.

To the Stockholders of
Edison Storage Battery Company,
Orange, N. J.

Gentlemen:

I hereby resign as Director of the Edison Storage
Battery Company, to take effect immediately.

Yours very truly,

FID/IWW

Frank L. Dyer

Put in Meadocraft

MINUTES

Special Meeting of the Board of Directors of the Edison Storage Battery Company, held pursuant to notice this 15th day of November, 1912 at eleven A. M. at the office of the Company, corner of Lakeside Avenue and Valley Road, West Orange, New Jersey.

Present:-

The meeting was called to order by the President.

The minutes of the last meeting were read and approved.

The Secretary stated that Mr. Frank L. Dyer had resigned as Vice-President and Director on November 9, 1912.

Upon motion duly made and seconded, and by the affirmative vote of all present, the following resolutions were adopted:-

"RESOLVED, that the Board of Directors of the Edison Storage Battery Company does hereby accept the resignation of Mr. Frank L. Dyer as Vice-President and Director of the Company.

RESOLVED, that Mr. Robert A. Bachman be elected Vice-President of the Company.

RESOLVED, that Mr. William H. Meadowcroft be elected a Director of the Company to hold office until the next annual meeting of the stockholders and until his successor shall be elected."

Mr. Harry F. Miller then tendered his resignation as Secretary.

Upon motion duly made and seconded, and by the affirmative vote of all present, the following resolutions were adopted:-

"RESOLVED that the Board of Directors of the Edison Storage Battery Company does hereby accept the resignation of Mr. Harry F. Miller as Secretary of the Company.

RESOLVED that Mr. William H. Meadowcroft be elected Secretary of the Company".

Mr. William H. Meadowcroft was thereupon duly sworn in as Secretary of the Company.

Upon motion duly made and seconded and by the affirmative vote of all present, the following resolutions were adopted:-

"RESOLVED that all authority heretofore granted by the Board of Directors for the signing and countersigning of the checks of this Company be and hereby is terminated and canceled, and that from and after the date of this meeting and until said Board of Directors shall otherwise indicate, the checks of this Company shall be signed by H. F. Miller, Treasurer, or by

J. V. Miller, Assistant Treasurer, and in order to become binding upon the Company shall be countersigned by Thomas A. Edison, President, or W. H. Meadowcroft, Secretary, and that the bank wherein the funds of the Company are deposited shall be notified of this action of the Board.

RESOLVED, that all authority heretofore granted by the Board of Directors for the signing and countersigning of promissory notes given by this Company, be and hereby is terminated and canceled, and that from and after the date of this meeting and until the Board of Directors shall otherwise indicate, such notes shall be signed by H. P. Miller, Treasurer, or by J. V. Miller, Assistant Treasurer, and in order to become binding upon the Company shall be countersigned by Thomas A. Edison, President."

The meeting upon motion adjourned.

Secretary.

W. H. Meadowcroft
H. P. Miller
Robert A. Hademan

[CA. NOVEMBER 1912]

THE EDISON STORAGE BATTERY

The Edison Storage Battery has made very large gains in the last twelve months. We have increased the plant in number of cells manufactured, making them to an A-4 cell basis 40% in the last twelve months from November 1st. Unfilled orders remaining on our books November 1st worked into an A-4 equivalent shows 50,000 cells.

We are losing a very large volume of business in all branches of the line owing to the fact that we are unable to deliver batteries promptly. In the automobile trade the battery is only one third the investment of the equipment, and when a firm has money tied up in an investment of this size they are impatient to get it on the street as soon as possible. When they find they are held up from thirty to ninety days getting delivery of a particular battery, they immediately order some other make that they can obtain on quick notice. Not only this but automobile manufacturers know the condition that we are in on cases of delivery, and when they have the opportunity of making a quick delivery, they cannot figure on Edison Batteries, knowing they cannot get them. This we don't hear of at the time. It all goes to show that we have got to increase our manufacturing plant at once.

Several of the large gasoline truck manufacturers are now figuring on going into the manufacture of electric vehicles, among them is the Studebaker Corporation who are bringing out a new line of electric trucks especially adapted for Edison Batteries. I understand from very good authority that the International Automobile Co., who handle Mack-Saurer-Bewitt Trucks are figuring on bringing out a new line of electric trucks.

The General Motors Co. have informed me that on February 1st they will place an order with us for 500 sets of batteries to be delivered in four months, and continue at that rate throughout the year.

The following automobile concerns will demand from December 1st on the following batteries per day:

General Motors Truck Co.	- 2 batteries A-6 equivalent 180 A-4's
The Landen Co., Newark,	- 2 batteries A-6 equivalent 180 A-4's
General Vehicle Co.	- 2 batteries A-6 equivalent 180 A-4's
Anderson Elec. Car Co.,	- 2 batteries A-4 equivalent 180 A-4's

The exclusive contract that we have had with Mr. Anderson was up on Nov. 1st and we have notified other pleasure car

manufacturers that if they would allow us to approve of their Edison Battery car model, we would be glad to furnish them with Edison Batteries. Up to this time the Rauch & Lange Carriage Co. of Cleveland are the only firm which have allowed us to approve their model. Tests that we have made on the car have all proved very satisfactory and we are all satisfied that we will get our share of their business.

Baker and Waverley both have a model which they have been making for a year suitable for Edison Batteries, which have been sold this last year with lead, so as it stands it means that pleasure car manufacturers who have cars suitable for Edison Batteries are:

Anderson Elec. Car Co.,
S. R. Bailey & Co.,
Baker Motor Vehicle Co.,
The Waverley Co., and
Rauch & Lang Carriage Company.

During this last year we have started a very large steam railroad business both in car-lighting, signal work and industrial trucks. During the last seven months the Illinois Central have placed orders with us for \$93,556.00 worth of storage batteries. The Pennsylvania Railroad in the last eight months have placed orders with us for \$86,817.00 worth of storage batteries. During the last six months the Norfolk & Western Railroad have placed orders for \$45,100.00, the Southern Pacific Railroad have placed orders for \$18,000.00.

It looks as if we were going to get a much larger volume of business during the coming year and it has practically been promised us.

Pennsylvania Railroad	-	20,000	cells
Illinois Central	"	-	5,000 "
Barriman Lines	"	-	10,000 "
All other roads	"	-	2,500 "

These are equivalent to A-4 cells.

We should at least get orders for 2,500 A-4 type cells for signal work and 1,000 A-4 cells for miscellaneous and baggage trucks.

I think this estimate very low.

One line of business we haven't touched which is enormous is the battery for electric self starter which gasoline manufacturers are putting on their gas cars. Mr. Henry Ford has come out flat-footed and made a statement that he was going to put electric self starters in his cars and he would not consider any other batteries but Edison. He has told us several times and a recent letter dated Oct. 24th in which his secretary makes a statement that Mr. Ford said he would consider nothing but Edison.

- 3 -

All this goes to show the importance of increasing the size of our manufacturing plant at once.

In determining the expense of the final renewal of any battery hereunder there shall be included only such proportion of the price of such final renewal as shall not overrun the said period of

For a period of ten (10) years, from date of receipt of any battery in —, the expense to the purchaser for the such original battery and all necessary renewals thereof shall not exceed an amount, for any size battery, equal to the "ten per cent maximum expense" for ~~each~~ ^{the respective} size cells ^{specified in such type of final renewal agreement} listed below, multiplied by the number of cells in the battery.

For Example

Assume the original battery lasts 4 years
 Assume the first renewal lasts 4 years
 Assume the second renewal lasts 4 years.
 There would be charged to the
 expense under the guarantee
 the original cost of the

the first cost of the original battery,
 the cost of the first renewal,
 and $\frac{3}{4}$ of the cost of the final
 renewal and if the sum of the
 above exceeds the guaranteed maximum
 the ~~customer~~ Light Company would
 be called upon to pay only the
 guaranteed amount.

$2150 \frac{1}{4}$ A 4 guaranteed
 10 years if lasts

2 batteries shall last 10 years
 & cost 2150 per cell of A 4 —

~~if the battery should last longer
 than 5 years say 7 years,~~

or 2150 per year 11075 per year
 per cell should the 1st battery
 last say 7 years.

The expense to the purchaser for a period of 10 years from date of receipt of any battery in Hartford, Connecticut, shall not exceed an amount equal to the total sum of the list price of the original battery less fifteen per cent (15%) discount plus the list price of a renewal battery less twenty five per cent (25%) discount; provided such battery and such renewal thereof are used exclusively in vehicles manufactured by the G. V. Co. of L. I. City, N.Y. On making renewals all old battery material shall be the property of the Edison Storage Battery Company. All prices for batteries or renewals to be f.o.b. point of shipment.

In determining the expense of the final renewal of any battery hereunder there shall be included only ~~the~~ such proportion of the price of such final renewal as shall not ~~exceed~~ ^{exceed} the said period of ten years above named, based on the average life of the original battery and any previous renewals thereof.

The battery co will furnish the first set of batteries at list with 15% discount ^{amount} ~~and~~ other batteries at list with 25% discount during a period of ten years, but in no case shall the light Co pay for more than two batteries over such period at above prices. If other batteries are required to fill the guaranteed term, they shall be furnished free ~~for the full~~ but the excess life as determined by the average life of the 2nd batteries shall be paid for on the basis of the cost to the light Co of the 2nd battery.

For instance, if the original and first renewal batteries should not give the capacity named for 10 years, and a second renewal became necessary under this guarantee, the average life of the two batteries would be ascertained. The Battery Company will then furnish said second renewal at list price less 25% discount and will rebate to the purchaser a sum equal to that proportion of the net price thereof as will represent the excess over the 10 year guarantee which such second renewal battery would give as based on the said average life.

The battery Co. guarantee that the life of a battery with one renewal of cells shall reach 10 years, - the original battery shall cost the light Co. list 15% of the renewal least 25% off - in case a 2nd renewal is required the

excess of life over the 10 yr period, based on the average life of the 1st 2 batteries shall be paid ~~for~~ to the Battery Co. at a price proportional to the cost of

the 1st renewal

The Battery Company guarantees that for the period of 10 years from the receipt of any battery in Hartford the expense of same to the purchaser ~~the~~ shall not exceed as follows:

\$21.60 per cell for type A 4

32.00 " " " " A 6

41.60 " " " " A 8

52.80 " " " " A 10

62.40 " " " " A 12

The original battery shall be paid for at list price less 15% discount, and renewal battery or batteries at list price less 25% discount.

Should two batteries give the guaranteed life of 10 years, or exceed it, nothing further shall be paid to the Battery Company. But

if a third battery is necessary to
 fulfill the guaranteed life, the same
 shall be paid for at list less
 25% discount but the Battery
 Company shall rebate to the Light
 Company an amount equal to the
 proportion due on the unexpired
 term of the 10 year guarantee
 based on the average life of the
 first two batteries.

$$\begin{array}{r}
 1 - 4 \text{ years} = 1000 \quad 1000 \\
 1 \text{ or } 4 \text{ " } = 750 \quad 750 \\
 \hline
 1 - R - 2 \text{ years} = 750 \quad 375 \\
 \hline
 7500 \quad 7125 \\
 1750 \quad 1750 \\
 \hline
 750 \quad 3751 \\
 750 \times \frac{3}{4} = 562.5 - 375 = 187.5
 \end{array}$$

3 years -

2 - 11

guarantees that for a period of ten years
the cost for batteries shall not exceed
— dollars. The 1st battery shall
be paid for a list with 15% discount
and renewal battery or batteries
at list with 25% discount,
should the ~~last battery~~ ~~to~~
two batteries. If the guaranteed
life is exceeded nothing further
shall be paid the battery Co —
but if a third battery is
necessary then the battery
Co shall receive no pay
~~for it if it fails to~~
~~function through the~~
until the 10 year period expires
any excess life of this 3rd
battery shall be paid to
the battery Co based on the average
life of the first 2

If under the above guarantee
a second renewal of battery becomes
necessary, the Battery Company shall
only be called upon to stand such
proportion of the price thereof as will
would be equivalent to a total
ensure the light Company receiving
10 years life of the battery on the
basis of ~~the orig.~~ paying for the
original and first renewal batteries
only.

If Battery put on top of vehicle

Note

1000 lb vehicle have one
take A 6 - 1 ton A 8 - 2 ton
A 10 - 3 & over A 12

Schedule X

The special trucks for the ~~station~~
Battery service, ^{designed} shall be provided
with appliances whereby the battery
can be put in or taken from the
vehicles without disturbing
~~the individual units~~ the individual
units, to the end that the great
number of removals over the
guaranteed life will not
tend to injure the battery
mechanically

2nd That the truck when
fully loaded and moving on
a 6% grade shall not
have a greater drop of
voltage on the wiring carrying
the current than $2\frac{1}{2}$ volts
with a 60 cell battery

3rd

Also that the battery box shall be so constructed that it may be closed in the winter to prevent ~~any~~ low temperature from affecting the discharge rate of the battery.

1000 lb vehicle to have box
to take A 6; - 1 ton A 8; - 2 ton
A 10; - 3 ton and over, A 12.

Schedule A

1st The special trucks for the Battery Service System shall be provided with appliances whereby the batteries can be put in or taken from the vehicles without disturbing the individual ^{units} ~~units~~, to the end that the great number of removals over the guaranteed life will not tend to injure the battery mechanically.

2nd that the truck when fully loaded and moving on a 6% grade shall not have a greater drop of voltage on the wiring carrying the current than 2 1/2 Volts with ~~at~~ a 60 Cell battery.

3rd also that the battery box
shall be so constructed
that it may be closed
in the winter to prevent
low temperature from
affecting the discharge
rate of the battery

Mr. Adcock,

If I understand right, ^{for an agreed depreciation} ~~Mr. Adcock~~ wants to be ~~sure~~ that ~~costs~~ of a six battery sixty cells shall not exceed hundred and eighty one dollars yearly over a period of ten years, on battery service scheme. If contract is so worded that Battery Co gets seventy five per cent of any sum less than ~~these figures~~ ^{on this basis} he can go ahead with the two special places ~~which~~ ^{which he states} must be closed at once but no further until my return when a proper contract is to be made. You will understand

that I want to benefit to the extent of ~~some~~ ~~Three~~ quarters in case ~~life of~~ ~~the battery~~ battery can be made to have a longer life than five years before exchange

If it is arranged that if Battery Co ~~increases~~ can increase the life of each set batteries beyond 5 yrs it should

AGREEMENT entered into this day of 1912
between Edison Storage Battery Company, a New Jersey Corporation,
and General Vehicle Company, a New York Corporation, hereinafter
referred to as the Battery Company and the Vehicle Company, respec-
tively, WITNESSETH:

WHEREAS: the Battery Company is in the business of making
and selling storage batteries, and the Vehicle Company is in the
business of making and selling electric vehicles, and

WHEREAS, the Vehicle Company in order to stimulate the
sale of its vehicles is willing to manufacture and sell its vehicles
to users minus the battery, and to adapt such vehicles mechanically
and electrically for the use of Edison Storage Batteries, it being
contemplated to sell such vehicles minus the battery for use in
localities where the Vehicle Company makes contracts with respon-
sible parties who agree to purchase, own and maintain a suffi-
cient supply of Edison Storage Batteries to be charged by them and
to be rented to owners of such vehicles made by the Vehicle Company,
on a basis of a charge for the service rendered, such plan being
herein designated "Battery Service System";

Now, it is agreed as follows:

1. The Battery Company agrees that it will sell to the
Vehicle Company its batteries, for use as herein contemplated, on
the following terms and conditions:

(a) That such batteries will be resold by the Vehicle
Company only to such parties as aforesaid that have contracted
with the Vehicle Company to maintain and continuously own a
sufficient supply of Edison Storage Batteries for use only in
vehicles mechanically and electrically adapted to the Edison
Storage Battery, and constructed in such manner that the battery
cradle may be quickly removed from the vehicle without disturbing
the battery units, and a cradle containing a charged battery may
be remounted without material delay;

(b) The Battery Company agrees that at all times the net cash sale price of a new vehicle battery to the Vehicle Company, as distinguished from an exchange transaction, shall be not higher than at present and at all times at least five and five (5% and 5%) per cent greater discount than at which the Battery Company regularly sells vehicle batteries to Central Stations, Power Companies or Garages for other uses than a Battery-Service System. The Battery Company may refuse to continue to sell on said terms batteries hereunder, if the Vehicle Company interferes with the Battery Company's business by selling said batteries for use ^{in the Battery Service System} hereunder at a discount greater than fifteen (15%) per cent from the Battery Company's list price.

(c) The guaranteed life of any battery to be sold as hereinafter contemplated and of one renewal thereof and the cost of the renewal thereof shall be governed by the terms of the guarantee as set forth in Schedule B.

The Vehicle Company agrees that the vehicles sold by it to be operated in connection with the Edison Storage Battery for use as contemplated herein, shall be constructed so as to be specially adapted mechanically and electrically for use with the Edison Storage Battery as made at the date of this agreement, it being understood that the design of such vehicles shall include such special and necessary mechanical and electrical appliances and arrangements for carrying the batteries as may be necessary in order that the batteries may be readily removed from the vehicle or attached to the vehicle without disturbing the cell units of the batteries and shall include the mechanical and electrical appliances specified in Schedule A. hereto annexed.

3. Unless sooner terminated by mutual consent, this agreement shall remain in force for the period of ⁵ years from date hereof and shall continue thereafter from year to year unless written notice of cancellation shall be given by either of the

*proposed
specifications*

*Many of them for filing with records
as a part of the report*

parties hereto to the other at least ninety days before the expiration of any yearly period; if such notice is given, this agreement shall terminate at the expiration of the yearly period next following the date of the notice.

4: THIS AGREEMENT is binding upon and shall enure to the benefit of the parties hereto and their several successors in business.

Don't know about this
9

IN WITNESS WHEREOF, the parties hereto have respectively caused these presents to be executed and their respective corporate seals to be hereunto attached by their proper officers thereunto authorized.

EDISON STORAGE BATTERY COMPANY,

By

GENERAL VEHICLE COMPANY,

By

SCHEDULE "A".

FIRST: The special vehicles contemplated herein shall be so constructed and provided with such fittings that the batteries can be put in or taken from the vehicles without disturbing the individual units, to the end that the great number of removals over the guaranteed life will not tend to injure the battery mechanically.

SECOND: The vehicle when fully loaded and moving on a six per cent (6%) grade shall not have a greater drop of voltage on the wiring carrying the current than two and one-half (2-1/2) volts with a sixty (60) cell battery.

THIRD: The Battery box shall be so constructed that it will be closed in the winter to prevent low temperature from affecting the discharge rate of the battery. *to be free*

with water ✓

COPY OF GUARANTEE OF EDISON STORAGE BATTERY COMPANY.

The Edison Storage Battery Company, agrees to and hereby does guarantee all Edison Storage Batteries sold through the General Vehicle Company to

as follows: provided that the batteries and the renewals thereof are used in vehicles manufactured by the General Vehicle Company, Long Island City, New York, and provided that such batteries are continuously owned, maintained and operated by the said

for use in a Battery Service System wherein charged batteries are leased or rented on a basis of service rendered and provided the batteries are operated in accordance with the instructions furnished by the Edison Storage Battery Company.

The Edison Storage Battery Company guarantees that the life of any battery with one renewal thereof shall be ten years.

The price of renewals shall be list price less 25% discount. In case a second renewal is required the probable excess of life over the ten year period shall be estimated, based on the average life of the original battery and first renewal and the

shall pay the Edison Storage Battery Company for such estimated excess life on a pro rata basis. On making renewals, all old batteries or battery material shall be the property of the Edison Storage Battery Company. All prices are f.o.b. factory.

This guarantee excludes all renewals required by reason of accident, misuse or abuse. All expense of maintaining crates and the renewal of electrolyte is also excluded from this guarantee.

The Edison Storage Battery Company shall have the opportunity to inspect the batteries at all reasonable times.

This guarantee is contingent upon conditions of credit being satisfactory at all times.

*Should be any renewal
for life beyond three years and*

No battery is to be renewed hereunder until its capacity has fallen to a point where it is incapable of giving ninety per cent (90%) of its rated capacity in Kilowatt hours.

The rated Kilowatt hour capacity of each cell is given below:

A 4	.180 K.W.H.
A 6	.270 " " "
A 8	.360 " " "
A10	.450 " " "
A12	.540 " " "

General Vehicle Company,
Long Island City,
N. Y.

Dear Sirs:

Referring to the agreement stated between the Edison Storage Battery Company, the Hartford Electric Light Company and the General Vehicle Company, it is contemplated that such agreement with the Hartford Company is only one of a number of similar agreements that it is proposed to make for the use of Edison batteries on the "Edison Battery-Service System" in vehicles of your manufacture only.

We understand that you propose to notify the various central stations throughout the country in regard to this System with the view of introducing it into extended use. We will not permit our batteries to be used on that System in any locality in vehicles other than yours.

With reference to such use with your vehicles in other localities, we agree to enter into agreements similar to that with the Hartford Company, with companies approved by us.

If we find at any time that this System or plan is operating to our direct disadvantage, we reserve the right to refuse to extend it by making agreements with reference to other localities, but leaving in force, of course, the agreements that may then have been made.

Very truly yours,

EDISON STORAGE BATTERY COMPANY,

By

COPY
A G R E E M E N T

Between
EDISON STORAGE BATTERY COMPANY
and
FREDERICK J. LISMAN, DAVID M.
MINZESHEIMER and WILLIAM GOODMAN

Dated January 10, 1914

MEMORANDUM OF AGREEMENT made the tenth day of January, 1914, by and between EDISON STORAGE BATTERY COMPANY, a New Jersey corporation having its principal office at West Orange, New Jersey, hereinafter called the "Edison Company", party of the first part, and FREDERICK J. LISMAN, DAVID M. MINZESHEIMER and WILLIAM GOODMAN, copartners, doing business under the name and style of F. J. Lisman and Company at #30 Broad Street, New York, N.Y., hereinafter called the "Bankers", parties of the second part, W I T N E S S E T H : -

WHEREAS, the Edison Company is engaged in the manufacture and sale of Edison storage batteries; and

WHEREAS, the Bankers desire to purchase Edison storage batteries from the Edison Company to be used and sold for the purpose hereinafter set forth;

NOW, THEREFORE, for and in consideration of the premises and of the mutual promises herein contained, and of the sum of One Dollar (\$1.00) in hand paid by the Bankers to the Edison Company and by the Edison Company to the Bankers, the receipt whereof is hereby acknowledged, the parties hereto have agreed and do hereby agree as follows:-

(1) Unless sooner terminated or extended as hereinafter provided for, this agreement shall continue until the 31st day of December, 1920.

(2) The Edison Company agrees, upon and subject to the conditions hereinafter stated, to sell exclusively

to the Bankers during the life of this agreement Edison storage batteries to be used only for the following purpose, namely: For the initial battery equipment of storage battery propelled passenger cars and trains of such passenger cars designed and constructed to run only upon rails (but not including electric locomotives except such ^{that are} storage battery propelled passenger cars/used as locomotives for hauling freight on roads where the passenger traffic is handled by such storage battery propelled ^{passenger} cars) and to be used only in the following territory, namely: United States of America including the District of Columbia, but excluding Alaska, the Panama Canal Zone and the possessions and dependencies of the said United States of America outside of North America, (said territory being hereinafter referred to as the "aforesaid territory"). When the words "Edison batteries" are hereinafter used, they are understood to mean the Edison storage batteries (as now made or hereafter improved) which constitute the subject matter of this agreement. *See
pg. 2
JAC
JYS*

(3) The Edison Company also agrees that during the life of this agreement and except as otherwise provided herein, it will not sell nor otherwise dispose of Edison storage batteries to be used within the aforesaid territory for the purpose set forth in Paragraph Two (2) hereof to any one other than the Bankers, but the Edison Company expressly reserves the right to use and permit others to use for said purpose within the aforesaid territory any of said batteries, such use to be restricted to demonstrations, experiments and tests only, and furthermore expressly reserves the exclusive right to sell and otherwise dispose of and to use and license for use within the aforesaid territory Edison storage batteries for renewals and replacements for storage battery propelled cars of all

kinds including cars of the class specified in Paragraph Two (2) hereof, and also reserves the exclusive right to sell and otherwise dispose of and use and license for use within the aforesaid territory Edison storage battery parts, supplies and accessories for any and all purposes except for the initial equipment of cars with respect to which the Bankers are expressly licensed hereunder. The Bankers agree that the promises and covenants of the Edison Company contained in this paragraph and paragraph Two (2) hereof shall be and are binding upon the Edison Company only so long as the Bankers shall continue to purchase from the Edison Company at least the number of A-10 cells set forth in the schedule contained in Paragraph Four (4) hereof or their equivalent in rated ampere hour capacity.

(4) The Bankers agree to purchase from the Edison Company all storage batteries which the Bankers shall require during the life of this agreement for the purpose set forth in Paragraph Two (2) hereof, and agree that during the life of this agreement they will not manufacture nor sell nor otherwise dispose of for use within the aforesaid territory any passenger car designed or intended to be propelled on rails by storage batteries except when equipped with Edison storage batteries exclusively, or when not so equipped, upon the condition that said car shall be used only when equipped with Edison storage batteries exclusively. The Bankers agree and promise that they will purchase hereunder from the Edison Company during the respective full six months periods of this agreement at least the number of A-10 cells set forth in the follow-

ing schedule or their equivalent in rated ampere hour capacity, said purchases to be made within the respective periods set forth in said schedule:-

During the first six months of the year 1914	1650 A-10 cells
During the last six months of the year 1914	1650 A-10 cells
During the first six months of the year 1915	4950 A-10 cells
During the last six months of the year 1915	4950 A-10 cells
During the first six months of the year 1916	8250 A-10 cells
During the last six months of the year 1916	8250 A-10 cells
During the first six months of the year 1917	12750 A-10 cells
During the last six months of the year 1917	12750 A-10 cells
During the first six months of the year 1918	19250 A-10 cells
During the last six months of the year 1918	19250 A-10 cells
During the first six months of the year 1919	27500 A-10 cells
During the last six months of the year 1919	27500 A-10 cells
During the first six months of the year 1920	35750 A-10 cells
During the last six months of the year 1920	35750 A-10 cells

In determining the amount of purchases made by the Bankers under and against the required minima of the aforesaid schedule, the Bankers shall receive credit against such minima for all initial storage battery equipment sold by the Edison Company to the Bankers for the purpose of Paragraph Two (2) hereof and for use in the aforesaid territory.

and also for any and all storage batteries which the Edison Company shall sell to the Bankers for the initial equipment of cars of the class specified in Paragraph Two (2) hereof for use in any other territory, provided the Bankers shall have received express permission in writing from the Edison Company to sell for use or use said batteries in said other territory, and no shipment of batteries shall be made by the Bankers to any territory other than the aforesaid territory except with such express permission first having been received from the Edison Company. If during any one of the aforesaid six months periods the purchase of Edison storage batteries by the Bankers shall be in excess of the above specified requirement for that six months period, then such excess shall be credited upon their obligation with respect to purchases for the succeeding six months period or periods. In the event of the termination of this agreement prior to the end of its term by the Edison Company as hereinafter provided, the Bankers shall be released to the following extent and to such extent only from their promise herein contained to purchase quantities of cells in accordance with the aforesaid schedule, to-wit: The Bankers shall not be required to purchase any of the cells required to be purchased in any six months period of said schedule which is subsequent to the receipt of notice of said termination from the Edison Company, and shall not be required to purchase during the six months period in which such termination shall become effective a portion of the quantity required to be purchased, computed as follows:- By dividing the quantity required to be purchased as aforesaid during said last mentioned six months period by 183

and multiplying the quotient thus obtained by the number of days from the receipt of notice of such termination to the end of said last mentioned six months period. Upon the termination of this agreement by the Edison Company as aforesaid, the number of A-10 cells then remaining to be purchased by the Bankers after due allowance for such release shall be the deficiency for which the Bankers shall be required to make settlement in either of the following ways at their option:

(a) By the actual purchase of the number of A-10 cells (or their equivalent in rated ampere hour capacity) included in such deficiency; or

(b) In lieu of such purchase, by paying to the Edison Company as liquidated damages the sum of Two Dollars (\$2.00) for each of the number of A-10 cells included in such deficiency.

(5) The Bankers agree to promote diligently throughout the aforesaid territory the sale of Edison storage battery propelled passenger cars of the class specified in Paragraph Two (2) hereof, and the sale of Edison storage batteries for use upon such storage battery propelled passenger cars, to foster the present and endeavor to create additional demand for such cars and for Edison storage batteries for use thereon, and to manufacture or cause to be manufactured cars sufficient in number and suitable in character to meet such demand, it being the intent and object of this provision to push and promote to such an extent as is reasonably possible the sales and purchases of Edison storage batteries.

(6) The Edison Company agrees to sell and the Bankers agree to purchase and pay for all Edison storage batteries supplied hereunder at the following prices, to-wit: Twenty percent (20%) discount from the Edison Company's general list prices in effect at the date of delivery hereunder of the batteries to the Bankers, and the Edison Company agrees that it will not increase its now current general list prices for present types of Edison storage batteries during the life of this agreement. All prices and deliveries hereunder shall be f.o.b. the Edison Company's factory, Orange, New Jersey, and all payments for such batteries shall be made in cash within thirty days from date of delivery, with two percent (2%) discount for cash within ten days from date of delivery.

(7) The Edison Company agrees to use reasonable diligence with its present manufacturing equipment and system in supplying the Bankers' requirements of Edison storage batteries hereunder, giving all orders hereunder from the Bankers a preference at least over orders from others subsequently placed. It is expressly agreed, however, that the Edison Company shall not be liable for any delay in deliveries of batteries hereunder due to any strike, fire, flood or any unforeseen or unavoidable cause, or due to inability to obtain or delay in obtaining material; nor for any other delay unless caused by the failure of the Edison Company to use reasonable diligence as aforesaid.

(8) The Bankers agree that they will not sell nor otherwise dispose of nor use nor authorize any other person, firm or corporation to use any battery purchased hereunder except for the purpose set forth in Paragraph Two (2)

hereof, and agree that they will not export or ship nor sell for export or shipment, nor otherwise dispose of any of said batteries for export or shipment from the aforesaid territory, except in such particular instances in which the written consent of the Edison Company to such export or shipment shall have been first obtained, and further agree that they will require each vendee, lessee or other user of any and all Edison storage batteries supplied hereunder to enter into agreements not to sell nor otherwise dispose of nor use any battery purchased hereunder except for the purpose set forth in Paragraph Two (2) hereof, and not to export or ship nor sell for export or shipment nor otherwise dispose of any of said batteries for export or shipment from the aforesaid territory, and the Bankers furthermore agree to co-operate with the Edison Company to enforce such agreements. The promises and covenants of the Bankers contained in this paragraph shall be binding upon them during the life of this agreement and also thereafter with respect to any and all batteries supplied hereunder which shall remain in existence and under their control.

(9) The Edison Company guarantees to the Bankers and to each and every subsequent purchaser that each and every battery of Edison storage battery cells which shall be supplied hereunder shall be capable of developing full rated capacity under normal conditions and shall continue to be capable of developing such capacity under normal conditions for a period of at least four years from the date of shipment from the Edison Company's factory, said guaranty being subject to the following conditions, and covering such cells only as to which the following conditions shall be faithfully observed:-

(a) Cells installed in a manner approved by the Edison Company at the time of installation or in accordance with written or printed instructions furnished by the Edison Company from time to time.

(b) Cells used only in connection with apparatus of a type approved by the Edison Company.

(c) Cells cared for and operated in a manner approved by the Edison Company or in accordance with such written or printed instructions of the Edison Company as the Edison Company may furnish to accompany each order of cells delivered as a guide for their care and use.

(d) Cells to which the Edison Company's authorized inspectors and agents shall have access for test and inspection at any reasonable time.

The Bankers agree to furnish or cause to be furnished the following information in regard to each installation of batteries to be supplied hereunder, namely: The draw-bar pull of the car on level track; the grade line of the track upon which said car is to be operated; the schedule of operation, and the proposed times of charging and discharging; and agree to use for said cars such equipment of batteries as the Edison Company shall recommend, and to cause to be made periodical inspections of the battery and car by competent inspectors at least six times a year during the four year guaranty period, it being agreed that the Edison Company itself will make periodical inspections by competent inspectors at least six times per year during such guaranty period.

If within such guaranty period of four years any of said batteries shall be found to be incapable of devel-

oping full rated capacity under normal conditions, the Edison Company will at its discretion, when said battery or the defective part thereof has been delivered to it, either replace said battery with another battery of full rated capacity or repair any defective cells of said battery to restore its full rated capacity, all such replacements and repaired cells to be delivered to the Bankers f.o.b. Edison Company's factory, Orange, N. J. It is understood and agreed, however, that whenever new cells are furnished under this guaranty to replace defective or impaired cells, the guarantee receiving such new cells for such replacement shall pay to the Edison Company the same price for each such new cell as the Bankers shall be charged for similar cells at the time of such replacement, less an allowance for the old cell returned, determined by deducting from the price originally paid for such cell a depreciation at the rate of twenty-five percent (25%) per year.

The Edison Company agrees to deliver with each and every battery purchased hereunder a guaranty substantially the same as the foregoing guaranty and transferable to the purchaser of the battery to which the said guaranty applies.

The Edison Company agrees that from time to time upon written or telegraphic report from the Bankers that any battery equipment supplied hereunder is defective or in need of repair at the Edison Company's factory, the Edison Company will loan and forward promptly to such point or points as the Bankers may direct one or two suitable car batteries to replace temporarily the battery or batteries which are to be returned to the Edison Company's factory for replacement or repair, but the Edison Company shall not be required to have outstanding on loan as aforesaid at any one time more than two car batteries. All transportation

charges to and from the Edison Company's factory upon car batteries so loaned shall be paid by the Bankers.

(10) The Edison Company agrees that the Bankers may relinquish their rights under this agreement and terminate the same at any time upon giving thirty days notice in writing to the Edison Company, and the Bankers agree that if they shall be in default at the expiration of said thirty days in the purchase of storage battery cells as required in the schedule contained in Paragraph Four (4) hereof, (the number of cells required to be purchased during any portion of a six months period being determined by prorating the number of days of the six months period elapsed down to the end of said thirty days with the number of days in said six months period), the Bankers will forthwith either purchase a sufficient quantity of cells to make up the total aggregate deficiency existing at the end of said thirty days or pay the Edison Company as liquidated damages the sum of Two Dollars (\$2.00) for each one of such number of A-10 cells as shall be required to make up such deficiency.

(11) Upon the breach of any provision of this agreement by the Bankers, the Edison Company shall have the right to revoke the rights hereby granted and to terminate this agreement by giving sixty days notice in writing to the Bankers (such notice may be given by the mailing of a letter, postage prepaid, addressed to F. J. Lisman & Company, 30 Broad Street, New York, N.Y.), but such revocation and termination shall not release the Bankers from any of their promises and covenants contained in Paragraph Eight (8) hereof, or from their promise to pay for cells theretofore furnished hereunder, or from their promise to pay any

sum due as liquidated damages hereunder. Except as herein after provided in this paragraph, the Edison Company shall not be required to supply any storage battery, part thereof, or accessory therefor to the Bankers from and after the giving of such notice by the Edison Company, except for the filling of bona fide orders for batteries for the purpose of paragraph two (2) hereof which shall have been already received by the Bankers at the time of the giving of such notice. Provided, however, that if the aforesaid breach shall consist merely in the failure of the Bankers to purchase the minimum number of cells required in the schedule set forth in Paragraph Four (4), the Bankers shall be entitled to the reinstatement of their rights under this agreement if within sixty days after the receipt of the aforesaid notice they shall purchase a sufficient number of cells to make up the total aggregate deficiency existing at the time of the giving of said notice. It is understood and agreed that the Edison Company shall be under no obligation to supply any storage battery, part thereof or accessory therefor to the Bankers during any period in which the Bankers shall be in default in any payment for any battery, part thereof, or accessory therefor sold and delivered hereunder.

(12) It is mutually agreed that upon the termination of this agreement by expiration or otherwise, the Bankers shall be and are hereby licensed to sell and dispose of any and all Edison storage batteries and battery equipment purchased hereunder then or hereafter owned or possessed by them either through original purchase or by repurchase, or by retaking, or otherwise soever; but such

license is strictly limited to the use, sale and disposition of such batteries for the purpose set forth in Paragraph Two (2) hereof, and only in the aforesaid territory, and subject to the provisions of Paragraph Eight (8) hereof, and such limited right of sale and disposition shall run to all trustees under all mortgages, car trusts, deeds of trust or similar instruments.

(13) The Edison Company agrees to indemnify and save the Bankers and their vendees of Edison batteries purchased hereunder harmless from and against any and all liability, judgment, recovery, claim, demand, cost, charge and expense (including counsel fees) if any way incurred by or accruing to the Bankers or their vendees, because of the sale or use of any storage battery cells, parts thereof, or accessories therefor supplied under this agreement, arising out of any suit or action duly instituted against the Bankers or any of their vendees, based upon the claim that the use or the intended use of such battery, part or accessory therefor, device or other improvement thereof infringes upon or is in violation of the United States patent rights of any person, firm, association, or corporation; provided that the Bankers or such vendees shall promptly notify the Edison Company of the institution of any such suit or action, and provided further that the Edison Company shall have the right to be represented by counsel in the defense of such suit or action, and if it so elects, shall have the right to assume sole and entire control of such defense; and provided further that in those cases in which the Edison Company shall elect to assume the sole and entire control of such defense, the Edison Company shall within ten days after the aforesaid notification of the institution of such suit or action, notify the defend-

ant to such suit or action of the intention of the Edison Company to assume the sole and entire control of such defense, and in all such cases in which the Edison Company shall assume such control, the Edison Company shall not be required to pay any counsel fees whatever incurred by the Bankers or their vendees; and provided further, that the Edison Company shall be liable under the provisions of this paragraph only in those cases where the aforesaid infringement is due solely to the use or sale of storage battery cells, parts thereof, or accessories therefor per se, and shall not be liable in those cases in which the infringement is due to the association of said cells, parts or accessories with other apparatus not supplied hereunder. The Edison Company agrees that upon request of the Bankers the Edison Company will furnish in writing to any of the Bankers vendees of Edison storage batteries supplied hereunder a promise substantially the same as, and subject to the conditions of, the foregoing portion of this paragraph.

(14) The Bankers agree that they will not make any contract or arrangement with any manufacturer of cars whereby any other manufacturer is excluded or substantially excluded from furnishing upon equal terms cars to be equipped for propulsion purposes with Edison storage batteries.

(15) The Edison Company agrees that if the Bankers shall have faithfully performed all their promises and covenants herein contained during the initial period of this agreement, that is to say, up to and including December 31, 1920, the Bankers shall be entitled to a renewal or extension of this agreement for a further period of three years from and after the expiration of the aforesaid initial

period, that is to say, up to and including December 31, 1923, provided that the Bankers shall have given notice in writing to the Edison Company at any time, not less than sixty days nor more than ninety days, prior to the expiration of the said initial period, stating their desire to have such renewal or extension hereof. Said renewal or extension shall be upon the same terms and conditions as those of the initial period except that the minimum number of cells or their equivalent in rated ampere hour capacity required and agreed to be purchased by the Bankers during the three years of the said renewal or extension, shall be as follows:-

During the first six months of the year 1921	- 35750 A-10 cells
During the last six months of the year 1921	- 35750 A-10 cells
During the first six months of the year 1922	- 35750 A-10 cells
During the last six months of the year 1922	- 35750 A-10 cells
During the first six months of the year 1923	- 35750 A-10 cells
During the last six months of the year 1923	- 35750 A-10 cells

(16) This agreement shall take effect upon the date hereof and shall be binding upon the Bankers jointly and severally. The obligations and benefits of the Edison Company hereunder shall be binding upon and inure to the successors and legal representatives of the Edison Company, and the obligations and benefits of the Bankers hereunder shall be binding upon and inure to the successors of the Bankers in the banking business of F. J. Lisman and Company. The Bankers shall not have the right to assign this agree-

ment, nor the right to transfer it except to their successors in the banking business of F. J. Lisman and Company. Such transfer shall not release the respective Bankers during their respective lifetimes from any liability or obligation hereunder; nor shall such transfer release their respective estates from any obligation or liability which shall have accrued hereunder at the times of their respective deaths.

IN WITNESS WHEREOF, the Edison Company has caused this agreement to be signed and sealed in duplicate by its officers thereunto duly authorized, and the Bankers have hereunto set their hands and seals in duplicate the day and year first above written.

(SEAL - Edison Storage
Battery Company)

EDISON STORAGE BATTERY COMPANY

Attest:

By Thos. A. Edison
President

Wm. H. Meadowcroft
Secretary

F. J. Lisman & Co.

By F. J. Lisman

Wm. G. Edinburg
Witness to signature of
Frederick J. Lisman

David M. Minzesheimer

William E. Keese
Witness to signature of
David M. Minzesheimer

William Goodman

F. A. Murray
Witness to signature of
William Goodman

State of New York)
 : ss.:
County of New York)

On this 12th day of January, in the year 1914, before me personally came FREDERICK J. LISMAN, DAVID M. MINZESHEIMER and WILLIAM GOODMAN, to me personally known and known by me to be the individuals described in and who executed the foregoing instrument, and severally acknowledged that they executed the same, as and for the purposes set forth therein.

Wm. G. Esinburg

Notary Public Kings County No. 82
Certificate filed in New York County
Reg. No. 28

My commission expires March 30, 1914

(SEAL)

Mr. Edison:-

Rushman. We put the number of the cells in each answer to below
Aug 20 1914
we will not give any instructions with the return to me
Wey
IN RE CONTRACT WITH F. M. LISMAN & COMPANY

There are several points to which your attention should be called in connection with the carrying out of the above contract, to-wit:

(1) Batteries sold under this contract are sold subject to restrictions as to their use. It is doubtful whether these restrictions can be enforced against a purchaser of the batteries subsequent to the Lisman Company in those cases where such purchaser has no notice of the restrictions. For this reason, the advisability and the feasibility of applying a restriction notice to the batteries should be considered. As I understand it, it is impracticable to apply a plate to the cell itself but ~~that~~ a plate may be applied to the tray if desired. Under the contract the Lisman Company agrees that they will require each vendee, lessee or other user of any battery supplied under the contract to enter into an agreement to comply with the restrictions of the contract applicable to the battery. In view of this agreement on the part of the Lisman Company and the rather small likelihood of these batteries being used for other purposes, it may be that as a practical matter you will decide to dispense with restriction notices on the batteries. I assume that a record will be kept by identifying numbers of all cells.

Noted HLB

(2) We agree that we will not sell batteries to others for the purpose for which the Lisman Company has an exclusive license under the contract. While the extent of our obligation under this covenant is not entirely clear, I think it will be advisable

(2)

for us in all cases where batteries are sold to others to make inquiry as to the use for which these batteries are purchased. I understand from Mr. Bee that as a general rule the Battery Company is informed as to the use the purchaser intends to make of the battery.

(3) A special form of guaranty in accordance with the contract should be prepared to accompany each battery supplied under the contract, and the battery identified in some suitable manner as, for example, by the numbers appearing on the cells.

HL-JS

Henry Canahan

Our executed copy of the agreement and the letter signed by Mr. Beach and Federal Storage Battery Car Co. have been sent to Mr. H. F. Miller to be filed. An extra copy of the agreement is attached hereto, and I suggest it be turned over to whoever is to have charge of carrying out the Storage Battery Co's part of the contract.

HL

Edison Storage Battery Co.

THOMAS A. EDISON
ROBERT A. MILLER, President
H. P. MILLER, Treasurer
EDWARD MILLER, Secretary

THOMAS A. EDISON
Thomas Edison

CABLE ADDRESS
"TYNODIC" NEW YORK

ORANGE, N.J., U.S.A.

May 22, 1916

Mr. Thomas A. Edison
Orange
N.J.

IN REPLYING
ADDRESS THE COMPANY
AND REFER TO
AK-8-2999

Dear Sir:

ALL OFFERS OF THIS COMPANY ARE SUBJECT TO THE FOLLOWING CONDITIONS: - METEOROLOGICAL AND CIRCULAR ERRORS SUBJECT TO CORRECTION. - OFFERS SUBJECT TO CHANGE WITHOUT NOTICE. - ALL PRICES AND DELIVERIES SUBJECT TO CHANGE WITHOUT NOTICE. - THE COMPANY WILL NOT BE LIABLE IN REGARD OF ANY DELAY IN MAKING DELIVERIES DUE TO STRIKE, FIRE, ACCIDENTS OR CAUSES BEYOND OUR CONTROL. - DELIVERIES FOR CONDITIONS WILL BE ALLOWED UNLESS MADE WITHIN THE DATE AFTER RECEIPT OF ORDER. - THE COMPANY DOES NOT ASSUME RESPONSIBILITY FOR LOSS OF CHARGES IN BATTERIES.

*Harry - when were these
purchases, it's the lot was
but some time ago sent it*

At the meeting of the Board of
Directors to be held on Wednesday May 24th
at 2 P.M., at the principal office of the
Company, West Orange, N.J., the Board will be
asked to ratify the action of the Treasurer
in purchasing on behalf of the Company, 25
First Mortgage Bonds of Edison Storage Battery
Company maturing on July 1, 1916.

*Mr. Edison
You - Put from
Franklin
& Grace
E. G.
H. M.*

Yours very truly,

Arthur Miller
Secretary.

Mr. H. J. Miller

*OK
10/2*

MORTGAGE

EDISON STORAGE BATTERY COMPANY

TO

FIDELITY TRUST COMPANY - TRUSTEE

\$2,000,000

DATED SEPTEMBER 1, 1916

MORTGAGE

THIS INSTRUMENT made this first day of September, 1916 by and between EDISON STORAGE BATTERY COMPANY, a corporation organized and existing under the laws of the State of New Jersey, and having its principal place of business at West Orange, County of Essex, in said State, party of the first part, (hereinafter called the Company), and FIDELITY TRUST COMPANY, a corporation organized and existing under the laws of the State of New Jersey, and having its principal office in the City of Newark, County of Essex, in said State, party of the second part (hereinafter called the Trustee), WITNESSETH THAT:-

WHEREAS, the Company has heretofore issued bonds secured by a certain mortgage, which said bonds were due for payment July 1, 1916, and certain of which said bonds have not yet been paid; and

WHEREAS, the Company is indebted to Mr. Thomas A. Edison, of West Orange, New Jersey, on open account; and

WHEREAS, the Company has acquired or is about to acquire certain property from said Thomas A. Edison used by the Company including the following:-

Boiler house and stack, including foundation, boilers and settings, blowers, coal and water handling apparatus and other equipment in, upon and about the premises at West Orange, New Jersey, hereinafter designated as Tract 6 and Tract 7;

Machinery, tools, furnaces, tanks, pumps, plating apparatus, electrical apparatus and wiring and other equipment in, upon and about the premises occupied by the Company at West Orange, N. J.;

Buildings, stacks, towers, tanks and other fixtures located upon the premises in Bloomfield and Belleville, N. J. leased or about to be

leased by the Company from said Thomas A. Edison, and machinery, tools, furnaces, boilers, tanks, pumps, electrical apparatus and wiring and other equipment in, upon and about said premises and buildings; and

WHEREAS, the Company has acquired or is about to acquire certain lands and buildings in West Orange, N. J. from said Thomas A. Edison and Thomas A. Edison, Incorporated, a corporation of New Jersey, of West Orange, New Jersey; and

WHEREAS, it is desired to provide funds for redeeming the said outstanding bonds and to enable the mortgage securing said bonds to be discharged; to pay the aforesaid indebtedness on open account to said Thomas A. Edison in whole or in part; to pay in whole or in part for the said land and buildings and other property acquired or to be acquired as aforesaid; to place the Company upon a better financial basis by converting a part or the whole of its outstanding floating indebtedness into a bonded indebtedness; and to provide funds for such other purposes as the Board of Directors in their discretion may deem proper and advisable, the Company with the consent and authorization of its stockholders at a meeting called for such purpose, and in pursuance of due action by its Board of Directors, has determined to issue its first mortgage five percent gold bonds in an amount not to exceed the sum of Two Million Dollars (\$2,000,000), and to secure all of the bonds so issued by a mortgage in the terms of this indenture upon the premises, goods, chattels, Letters Patent and applications for Letters Patent hereinafter described, and any and all real estate hereafter to be acquired, which said bonds shall be two thousand (2000) in number and of the par value of One Thousand Dollars (\$1000) each, numbered from 1 to 2000, both inclusive. Said bonds are to bear the same date as this indenture, are to be payable upon the dates of maturity hereinafter specified in gold coin of the United States of America of the standard of weight and

fineness existing September 1, 1916, and shall bear interest from September 1, 1916 at the rate of five percent (5%) per annum payable in like gold coin semi-annually on the first day of March and September in each and every year from the first day of March, 1917 until the payment of the principal amount thereof, and shall be issued as coupon bonds and shall have attached thereto coupons representing the semi-annual installments of interest thereon, each of which coupons is to be authenticated by the facsimile signature of the present treasurer or of any future treasurer of the Company, and all such coupon bonds are to be registrable as to principal, and the said bonds with the coupons thereto pertaining are to be substantially of the following form, the distinguishing number and the date of maturity thereof being properly inserted, namely:-

UNITED STATES OF AMERICA

State of New Jersey

No. _____

Amount \$1000

Edison Storage Battery Company

First Mortgage Five Percent Gold Bond

KNOW ALL MEN BY THESE PRESENTS, that Edison Storage Battery Company, a corporation organized under the laws of the State of New Jersey, for value received, hereby acknowledges itself to be indebted to the bearer, or if registered, to the registered holder hereof in the sum of One Thousand Dollars (\$1000), which sum it promises to pay to the lawful holder hereof in gold coin of the United States of America of the standard of weight and fineness existing September 1, 1916, at the office of Edison Storage Battery Company at West Orange aforesaid on the first day of _____, Nineteen Hundred and _____ (unless sooner paid as hereinafter provided),

with interest thereon at the rate of five percent (5%) per annum payable in like gold coin at said office on the first day of March and September in each and every year, on the presentation and surrender of the annexed coupons as they severally mature.

The principal and interest on this bond are payable without deduction for any tax or taxes or stamp duties (other than succession, inheritance or estate taxes) which said Edison Storage Battery Company or Fidelity Trust Company, Trustee under the mortgage hereinafter referred to, may be required to pay thereon or to retain or to deduct therefrom under any present or future law of the United States of America or any State, County, Municipality or any taxing authority thereof.

This bond is one of a duly authorized issue of bonds of said Edison Storage Battery Company of like date, tenor and effect, except as to the distinguishing number and date of maturity thereof, issued and to be issued to an amount not to exceed Two Million Dollars (\$2,000,000) in the aggregate, and numbered from 1 to 2000, inclusive, under and in pursuance of and all ratably secured by the first mortgage bearing even date herewith, duly executed by said Edison Storage Battery Company to the Fidelity Trust Company, of Newark, New Jersey, as Trustee, of and upon the property mentioned therein, to which indenture of mortgage reference is hereby made for the description of the property mortgaged and the nature and extent of the security and the rights of the holders of said bonds under the same, and the terms and conditions upon which said bonds are issued, secured and payable.

If default shall be made in the payment of interest on this bond or in the performance or observance of any of the covenants, obligations and agreements in said mortgage contained, then the principal of this bond may be declared and become due and payable, but only on the conditions and in the manner and at the time provided in said mortgage.

This bond is subject to redemption at the option of said Edison Storage Battery Company on September 1, 1917 or on any interest date thereafter at one hundred and five percent (105%) of the face value thereof, and accrued interest, upon notice, as provided in said mortgage.

This bond until registered shall pass by delivery. It may as to principal be registered in the books of said Edison Storage Battery Company to be kept at its office in West Orange aforesaid; and if so registered will thereafter be transferable only upon the books of the said Edison Storage Battery Company by the owner in person or by his attorney, unless the last preceding transfer shall have been to bearer and the transfer by delivery thereby restored. And it shall be susceptible of successive registrations and transfers to bearer at the option of the holders, but such registration shall not affect the negotiability of the annexed coupons, which shall continue to be transferred by delivery merely and payable to bearer.

No recourse shall be had for the payment of the principal or interest of this bond to the stockholders, officers or directors, present or future, of said Edison Storage Battery Company, either directly or indirectly, by virtue of any statute or by enforcement of any assessment or otherwise, and any and all liability of such stockholders, officers and directors in respect to said bonds is hereby expressly waived and released by every holder hereof.

This bond shall not be valid until authenticated by a certificate of the Fidelity Trust Company as Trustee endorsed thereon, or its successor in trust

IN WITNESS WHEREOF, said Edison Storage Battery Company has caused these presents to be signed by its Vice-President and Financial Executive

and its corporate seal to be hereunto affixed and attested by its Secretary, and the coupons for such interest bearing the facsimile signature of its Treasurer to be attached hereto this first day of September, 1916.

EDISON STORAGE BATTERY COMPANY.

By _____

Vice-President and Financial Executive

Attest:-

Secretary

COUPON

No. _____

On the first day of _____, 19____, Edison Storage Battery Company will pay to the bearer at its office in West Orange, N. J. Twenty-five Dollars (\$25.00) in gold coin of the standard of weight and fineness existing September 1, 1916, being six months interest on its first mortgage gold bond No. _____, on the presentation and surrender of this coupon, unless said bond shall be sooner redeemed.

\$25.00

Treasurer

AND WHEREAS, on each of said bonds there is to be endorsed a certificate of the Trustee or of its successor appointed hereunder, that said bond is one of the bonds described in this indenture and no bond is to be secured by this indenture or to be obligatory for any purpose unless such certificate shall have been executed by the Trustee or its duly appoint-

ad successor, which certificate is to be of the following form, namely:

TRUSTEE'S CERTIFICATE

Fidelity Trust Company hereby certifies that the within bond is one of the series of bonds described in the mortgage within mentioned.

Fidelity Trust Company

by _____

Trust Officer

AND WHEREAS all acts and things prescribed by law and by the by-laws of the Company necessary to make said bonds, when authenticated by the certificate of the Trustees, valid, binding and legal obligations of the Company, and these presents a valid indenture according to its tenor to secure and to provide for the payment of said bonds, have been done or performed or have happened, and the form, execution, issue and delivery of said bonds, and the form, execution and delivery of this indenture have been in all respects duly authorized by the Board of Directors and by the stockholders of the Company.

NOW, THIS INDENTURE WITNESSETH:-

That in consideration of the premises and of the purchase and acceptance of such bonds by the holders thereof and of the sum of One Dollar to it duly paid by the Trustee at or before the unsealing and delivery of these presents, the receipt whereof is hereby acknowledged, and in order to secure the payment of the principal and interest of all such bonds at any time issued and outstanding under this indenture according to their tenor and effect and the performance of all the covenants herein contained and to

declare the terms and conditions upon which said bonds are issued and received, the Company has executed and delivered these presents and has granted, bargained, sold, aliened, released, conveyed, confirmed, assigned, transferred, mortgaged, set over and warranted, and by these presents does grant, bargain, sell, alien, release, convey, confirm, assign, transfer, mortgage, set over and warrant unto Fidelity Trust Company, a corporation of the State of New Jersey, having its principal office in the City of Newark, County of Essex in said State, all the following described property, namely:-

First: (a) All that tract or parcel of land and premises, herein-after particularly described, situate, lying and being in the Borough of Glen Ridge in the County of Essex and State of New Jersey.

BEGINNING in the north-easterly line of Bloomfield Avenue at the easterly corner of property now or formerly of Mrs. M. Benson, which corner is also distant in said line of Bloomfield Avenue, three hundred and ninety one and sixty four one hundredths feet more or less westerly from the centre line of Herman Street; thence running along Bloomfield Avenue south twenty three degrees, thirty two minutes east, one hundred and sixty nine and sixty hundredths feet; thence north forty five degrees, twenty seven and one half minutes east, five hundred and forty and thirty five one hundredths feet more or less to the southerly line of Bellovillo Avenue; thence along the same the different courses thereof one hundred and thirty seven feet or more to the north-easterly corner of said Benson's land; thence along the same south forty eight degrees, five minutes west, four hundred and seventy two feet more or less to Bloomfield Avenue and place of beginning. Being the same premises conveyed to the party of the first part by Thomas A. Edison and wife by their deed dated July 11th, 1901, and recorded in the Register's Office of the County of Essex in book N-34 of Deeds for said County on pages 460 et seq.

(b) All those tracts or parcels of land and premises hereinafter particularly described, situate, lying and being in the Town of West Orange, in the County of Essex and State of New Jersey.

Tract 1.

BEGINNING at the intersection of the easterly line of Valley Street with the southerly line of Lakeside Avenue, and running thence along said line of Lakeside Avenue South forty-eight degrees thirty-seven minutes East three hundred and thirty-one feet and twenty-nine one hundredths of a foot to the westerly line of Ashland Avenue; thence along said line of Ashland Avenue South forty-eight degrees twenty-two minutes West six hundred and thirty-five feet and fifty one hundredths of a foot to the Northerly line of Charles Street; thence along said line of Charles Street North forty-one degrees thirty-eight minutes West one hundred and fifty feet; thence parallel with Ashland Avenue North forty-eight degrees twenty-two minutes East ninety feet; thence parallel with Charles Street South forty-one degrees thirty-eight minutes East fifty feet; thence parallel with Ashland Avenue North forty-eight degrees twenty-two minutes East thirty feet; thence parallel with Charles Street North forty-one degrees thirty-eight minutes West fifty feet; thence parallel with Ashland Avenue North forty-eight degrees twenty-two minutes East two hundred and ninety-eight feet and ninety-four one hundredths of a foot; thence North thirty-eight degrees fifty-six minutes West one hundred and fifty feet more or less to the easterly line of Valley Street; thence north-easterly along said line of Valley Street, curving to the left on an arc of a circle having a radius of eight hundred and twenty-seven feet and fifty one hundredths of a foot, a distance of one hundred and twenty-one feet and twenty-eight one hundredths of a foot, and thence still along said line of Valley Street North thirty-six degrees fifteen minutes East fifty feet and forty-four one hundredths

of a foot to the southerly line of Lakeside Avenue and point of Beginning. Being the same premises conveyed to National Phonograph Company (now named Thomas A. Edison, Incorporated) by deed from Edison Manufacturing Company, dated October 30, 1905, and recorded in the office of the Register of Deeds for Essex County in Book L-39 of Deeds for said County on pages 236-238.

Tract 2.

BEGINNING at a point in the southerly line of land formerly of Andrew O'Connor distant therein one hundred feet westerly from the westerly line of Ashland Avenue; thence along said O'Connor's line westerly fifty feet; thence southerly about parallel with Ashland Avenue thirty feet; thence easterly and parallel with the first mentioned line fifty feet to a point distant one hundred feet westerly from the westerly line of Ashland Avenue; thence northerly thirty feet to the place of Beginning. Being the same premises conveyed to National Phonograph Company (now named Thomas A. Edison, Incorporated) by deed from Susan I. Sexton and Cornelius E. Sexton, her husband, dated September 4, 1908, and recorded in the office of the Register of Deeds for Essex County in Book D-46 of Deeds for said County on pages 150-152.

Tract 3.

BEGINNING on the northerly side of Charles Street in the line of Lot No. 8 in Block G as laid down on Map No. 1 of property of D. M. Hopes; thence running along said Charles Street westerly sixty feet; thence northerly at right angles with said Charles Street sixty-five feet; thence easterly parallel with said Charles Street sixty feet; and thence southerly at right angles with said Charles Street sixty-five feet to said Charles Street and place of Beginning. Being the same premises conveyed to Thomas A. Edison, Incorporated by deed from Heman J. Redfield and Eva F. Redfield, dated March 27, 1912, and recorded in the Office of the Register of Deeds for

Essex County in Book P-52 of Deeds for said County on pages 336-339.

TRAC D.

BEGINNING at a point in the Easterly line of Valley Street or Road distant Twenty-five feet Northeastly from the Northwesterly corner of land formerly belonging to the Estate of Aaron B. Harrison which beginning point is also the Northwesterly corner of land formerly conveyed to Mary Morris; thence along her line Southeasterly One Hundred and fifty feet; thence North forty-eight degrees, twenty-two minutes East Twenty-five feet; thence Northwesterly One Hundred and fifty feet to the said Valley Street or Road and thence along the same Southwesterly Twenty-five feet more or less to the line of said Morris and place of Beginning. Being the same premises conveyed to said Edison Storage Battery Company by George A. Poppa and Fannie M. Poppa, his wife, by deed dated May 23, 1913 and recorded in Book V-53 of Deeds for Essex County on pages 60-61.

TRAC E.

BEGINNING at a point in the easterly line of Valley Street or Road at the Northwesterly corner of land formerly belonging to the Estate of Aaron B. Harrison; thence running South thirty-eight degrees, fifty-six minutes East, one hundred and forty-eight feet and eighty hundredths of a foot; thence running North forty-eight degrees, twenty-two minutes East, twenty-five feet; thence running Northwesterly one hundred and fifty feet more or less to a point in the Easterly line of said Valley Street or Road distant along the line of said Street or Road twenty-five feet Northwesterly from the place of beginning; thence running Southwesterly along the Easterly line of said Valley Street or Road twenty-five feet to the place of Beginning. Being the same premises conveyed to said Edison Storage Battery Company by George A. Poppa and Fannie M. Poppa, his wife, by deed dated July 1, 1913 and recorded in Book P-53 of Deeds for Essex County on pages

61-65.

Tract 6.

BEGINNING on the southerly side of Lakeside Avenue at a point therein distant one hundred and fifty feet easterly from Ashland Avenue; thence running southerly on a line at right angles to Lakeside Avenue one hundred and sixty and seventy-five hundredths feet to land now or formerly of Henry Miller; thence running westerly along said Miller's line twenty-five feet and eighteen and one half hundredths of a foot to land now or formerly of Bernard Byrne; thence running along the land of said Bernard Byrne one hundred and fifty-seven feet and sixty-nine hundredths of a foot more or less to Lakeside Avenue; thence running easterly along the line of said Avenue twenty-five feet to the Beginning. Being the easterly half of lot No. 21, block H, as laid down on Map No. 1 of property of D. N. Ropes, and a part of the premises conveyed to said Edison Storage Battery Company by John Contrell and Jennie A. Contrell, his wife, by deed dated July 1, 1913 and recorded in Book T-53 of Deeds for said County on pages 65-66.

Tract 7.

BEGINNING on the southerly side of Lakeside Avenue at a point therein distant one hundred and fifty feet easterly from Ashland Avenue; thence running along said Lakeside Avenue easterly twenty-five feet; thence southerly at right angles with said Lakeside Avenue one hundred and sixty three feet and eighty hundredths of a foot to land now or lately of Henry Miller; thence along the same (being lot #24 on the map hereinafter referred to) twenty-five feet and eight hundredths of a foot to lot #21 and thence along the same at right angles with said Lakeside Avenue, northerly one hundred and sixty feet and nine inches to said Lakeside Avenue and place of Beginning. Being the westerly half of lot #20 in Block H on Map #1 of property of D. N. Ropes, and part of the same premises conveyed to said

Edison Storage Battery Company by John Contrall and Jennie A. Contrall, his wife, by deed dated July 1, 1913, and recorded in Book K-53 of Deeds for said County on pages 63-65.

Tract 8.

BEGINNING in the westerly line of the premises described in the deed from Estelle Joralemon to Mary Beirne, recorded in Book C 32 of Deeds for Essex County, on pages 281, etc., at a point distant fifty feet northerly from lands formerly of one Shrum and now of Thomas A. Edison, Incorporated (National Phonograph Company renamed), which beginning point is also distant one hundred and four feet and sixty-four hundredths of a foot from a point in the southerly side of Lakeside Avenue, one hundred feet east of Ashland Avenue; running thence southeasterly in a straight line parallel to Lakeside Avenue a distance of twenty-five feet to land formerly of one Patrick Brury and now of said Edison Storage Battery Company, thence southeasterly along said land of said Edison Storage Battery Company at right angles to Lakeside Avenue, a distance of fifty-one and eight tenths feet more or less to lands formerly of said Shrum and now of said National Phonograph Company and to the southern extremity of a triangular plot conveyed to said National Phonograph Company by deed dated April 5, 1907 and recorded in Book I 41 of Deeds for Essex County on pages 583 to 585; and thence northerly in a straight line along the eastern boundary of said triangular plot fifty-seven and one-half feet more or less to the place of Beginning. Being the same premises conveyed to said Edison Storage Battery Company by Mary Beirne and Bernard Beirne, her husband, by deed dated November 18, 1913 and recorded in Book Q-53 of Deeds for said County on pages 296-298.

Together with all the buildings and works now or hereafter erected upon the aforesaid tracts or parcels of land and premises, and all and singular the tenements, hereditaments and appurtenances thereto belonging

in any wise appertaining, and the réversions and remainders, rents issues and profits thereof.

Second: All of the buildings, stacks, towers, tanks and other fixtures now owned or hereafter acquired by the Company on certain tracts or parcels of land situate in the Towns of Bellaville and Bloomfield, in the County of Essex and State of New Jersey, which said tracts or parcels of land are leased or about to be leased by Thomas A. Edison to the Company.

Third: All patterns and drawings now owned or hereafter to be acquired by the Company and used in its business,

Fourth: All machinery, tools, furnaces, tanks, pumps, plating apparatus including cranes, electrical apparatus (including transformers, switch-boards, testing panels, rheostats, motors, generators and cables and wiring) boilers, coal and water handling apparatus, implements, fixtures, fittings and factory appliances, and other apparatus of whatever kind now owned or hereafter acquired by the Company and used by it in its manufacturing business,

Fifth: All office furniture and fixtures now owned or hereafter acquired by the Company and used by it in its business.

Sixth: All patents, patent applications and patent rights now owned or hereafter to be acquired by the Company including the following Letters Patent of the United States of America and applications for such Letters Patent:

PATENTS.

No. 692,507,	granted Feb.	4,	1902,	upon an application of Thomas A. Edison.
No. 700,136,	granted May	13,	1902,	upon an application of Thomas A. Edison.
No. 700,137,	granted May	13,	1902,	upon an application of Thomas A. Edison.
No. 701,904,	granted June	18,	1902,	upon an application of Thomas A. Edison.
No. 704,303,	granted July	8,	1902,	upon an application of Thomas A. Edison.
No. 704,304,	granted July	8,	1902,	upon an application of Thomas A. Edison.
No. 704,305,	granted July	8,	1902,	upon an application of Thomas A. Edison.
No. 704,306,	granted July	8,	1902,	upon an application of Thomas A. Edison.
No. 721,682,	granted March	3,	1902,	upon an application of Thomas A. Edison.
No. 723,449,	granted March	24,	1902,	upon an application of Thomas A. Edison.

No. 723,460, granted March 24, 1903, upon an application of Thomas A. Edison.
 No. 727,117, granted May 5, 1903, upon an application of Thomas A. Edison.
 No. 727,118, granted May 5, 1903, upon an application of Thomas A. Edison.
 No. 754,858, granted March 15, 1904, upon an application of Thomas A. Edison.
 No. 754,859, granted March 15, 1904, upon an application of Thomas A. Edison.
 No. 754,125, granted July 5, 1904, upon an application of Thomas A. Edison.
 No. 756,371, granted July 19, 1904, upon an application of J. W. Aylsworth.
 No. 767,554, granted August 15, 1904, upon an application of Thomas A. Edison.
 No. 761,857, granted Feb. 7, 1905, upon an application of J. W. Aylsworth.
 No. 765,297, granted March 21, 1905, upon an application of Thomas A. Edison.
 No. 797,045, granted August 22, 1905, upon an application of Thomas A. Edison.
 No. 815,491, granted Feb. 27, 1906, upon an application of Thomas A. Edison.
 No. 817,182, granted April 10, 1906, upon an application of J. W. Aylsworth.
 No. 817,162, granted April 10, 1906, upon an application of Thomas A. Edison.
 No. 821,032, granted May 22, 1906, upon an application of Thomas A. Edison.
 No. 821,023, granted May 23, 1906, upon an application of Thomas A. Edison.
 No. 821,024, granted May 23, 1906, upon an application of Thomas A. Edison.
 No. 821,025, granted May 23, 1906, upon an application of Thomas A. Edison.
 No. 821,026, granted May 23, 1906, upon an application of Thomas A. Edison.
 No. 821,027, granted May 23, 1906, upon an application of Thomas A. Edison.
 No. 821,028, granted May 23, 1906, upon an application of Thomas A. Edison.
 No. 827,207, granted July 21, 1906, upon an application of Thomas A. Edison.
 No. 831,259, granted Sept. 18, 1906, upon an application of Thomas A. Edison.
 No. 837,773, granted Dec. 4, 1906, upon an application of J. W. Aylsworth.
 No. 839,771, granted Dec. 25, 1906, upon an application of Thomas A. Edison.
 No. 850,450, granted April 14, 1907, upon an application of J. W. Aylsworth.
 No. 850,914, granted April 23, 1907, upon an application of Thomas A. Edison.
 No. 852,424, granted May 7, 1907, upon an application of Thomas A. Edison.
 No. 854,200, granted May 21, 1907, upon an application of Thomas A. Edison.
 No. 857,041, granted June 18, 1907, upon an application of Thomas A. Edison.
 No. 857,929, granted June 25, 1907, upon an application of Thomas A. Edison.
 No. 860,195, granted July 15, 1907, upon an application of Thomas A. Edison.
 No. 861,242, granted July 23, 1907, upon an application of Thomas A. Edison.
 No. 862,145, granted August 5, 1907, upon an application of Thomas A. Edison.
 No. 865,367, granted Sept. 10, 1907, upon an application of Thomas A. Edison.
 No. 866,560, granted Sept. 10, 1907, upon an application of Thomas A. Edison.
 No. 870,024, granted Nov. 5, 1907, upon an application of Thomas A. Edison.
 No. 871,214, granted Nov. 19, 1907, upon an application of Thomas A. Edison.
 No. 873,220, granted Dec. 10, 1907, upon an application of Thomas A. Edison.
 No. 876,445, granted Jan. 14, 1908, upon an application of Thomas A. Edison.
 No. 879,312, granted Feb. 15, 1908, upon an application of Thomas A. Edison.
 No. 879,859, granted Feb. 25, 1908, upon an application of Thomas A. Edison.
 No. 880,454, granted Feb. 25, 1908, upon an application of Thomas A. Edison.
 No. 880,957, granted March 3, 1908, upon an application of J. W. Aylsworth.
 No. 880,978, granted March 3, 1908, upon an application of Thomas A. Edison.
 No. 880,979, granted March 3, 1908, upon an application of Thomas A. Edison.
 No. 882,144, granted March 17, 1908, upon an application of Thomas A. Edison.
 No. 895,811, granted August 25, 1908, upon an application of Thomas A. Edison.
 No. 895,812, granted August 25, 1908, upon an application of Thomas A. Edison.
 No. 898,409, granted Sept. 15, 1908, upon an application of Thomas A. Edison.
 No. 898,503, granted Sept. 15, 1908, upon an application of Thomas A. Edison.
 No. 914,342, granted March 2, 1909, upon an application of Thomas A. Edison.
 No. 914,343, granted March 2, 1909, upon an application of Thomas A. Edison.
 No. 914,372, granted March 2, 1909, upon an application of Thomas A. Edison.
 No. 935,635, granted Oct. 12, 1909, upon an application of Thomas A. Edison.

No. 936,525, granted Oct.	12, 1909, upon an application of Thomas A. Edison.
No. 938,451, granted Oct.	26, 1909, upon an application of J. W. Aylsworth.
No. 940,556, granted Nov.	10, 1909, upon an application of Thomas A. Edison.
No. 945,540, granted Jan.	17, 1910, upon an application of Thomas A. Edison.
No. 948,542, granted Feb.	6, 1910, upon an application of Thomas A. Edison.
No. 948,558, granted Feb.	8, 1910, upon an application of Thomas A. Edison.
No. 950,227, granted Feb.	22, 1910, upon an application of Thomas A. Edison.
No. 956,517, granted April	26, 1910, upon an application of Thomas A. Edison.
No. 976,791, granted Nov.	22, 1910, upon an application of Edison & Aylsworth.
No. 976,792, granted Nov.	22, 1910, upon an application of Thomas A. Edison.
No. 986,919, granted April	4, 1911, upon an application of J. P. Ott.
No. 996,762, granted August	8, 1911, upon an application of Thomas A. Edison.
No. 1012,558, granted Dec.	24, 1911, upon an application of Thomas A. Edison.
No. 1012,674, granted Feb.	6, 1912, upon an application of Thomas A. Edison.
No. 1034,002, granted July	30, 1912, upon an application of Thomas A. Edison.
No. 1034,003, granted July	30, 1912, upon an application of Thomas A. Edison.
No. 1036,471, granted August	20, 1912, upon an application of Thomas A. Edison.
No. 1046,891, granted Nov.	24, 1912, upon an application of W. B. Holland.
No. 1080,436, granted Jan.	14, 1913, upon an application of Thomas A. Edison.
No. 1078,107, granted Sept.	16, 1913, upon an application of Thomas A. Edison.
No. 1076,761, granted Nov.	12, 1913, upon an application of O. A. Regere.
No. 1085,559, granted Jan.	6, 1914, upon an application of Thomas A. Edison.
No. 1093,353, granted Jan.	6, 1914, upon an application of Thomas A. Edison.
No. 1115,468, granted Oct.	127, 1914, upon an application of Thomas A. Edison.
No. 1116,993, granted Nov.	10, 1914, upon an application of M. R. Hutchison.
No. 1117,493, granted Nov.	17, 1914, upon an application of M. R. Hutchison.
No. 1130,977, granted March	9, 1915, upon an application of M. R. Hutchison.
No. 1135,100, granted Dec.	21, 1915, upon an application of W. B. Holland.
No. 1135,101, granted Dec.	21, 1915, upon an application of Hutchison & Horton.
No. 1137,684, granted Jan.	11, 1916, upon an application of Thomas A. Edison.
No. 1137,685, granted Jan.	11, 1916, upon an application of Thomas A. Edison.
No. 1176,065, granted April	6, 1916, upon an application of Thomas A. Edison.
No. 1187,144, granted June	13, 1916, upon an application of M. R. Hutchison.

Applications.

Serial No. 806,369, filed Dec. 13, 1913, by Heinrich H. Mene Kammerhoff for Current Supplying Apparatus.

Serial No. 817,494, filed Feb. 9, 1914, by Heinrich H. Mene Kammerhoff for Gas Filtering or Separating Valves. Patented July 11, 1916, No. 1,190,654.

Serial No. 817,495, filed Feb. 9, 1914, by Heinrich H. Mene Kammerhoff for Galvanic Batteries.

Serial No. 834,295, filed Apr. 25, 1914, by M. R. Hutchison for Storage Batteries.

Serial No. 840,462, filed May 23, 1914, by M. R. Hutchison and C. W. Horton for Storage Batteries.

Serial No. 851,765, filed July 18, 1914, by M. R. Hutchison for Filling Device or Valve for Storage Batteries or other Receptacles.

Serial No. 886,627, filed Aug. 13, 1914, by Charles W. Norton for
Secondary or Storage Battery

Serial No. 4,125, filed Jan. 25, 1915, by Jerry Chealer for Power
Transmission Devices.

Serial No. 62,961, filed Nov. 23, 1915, by James F. Monahan for
Electric Safety Lantern.

Serial No. 64,207, filed Nov. 20, 1915, by James F. Monahan for
Tray for Battery Cells.

Serial No. 65,127, filed Dec., 22, 1915, by Roscoe J. Smith for
Galvanic Batteries.

Seventh: The good will of the business of the Company and all property, property rights and assets now owned or hereafter acquired by the Company excepting the following, viz: the Company's current and working assets, including Cash, Accounts Receivable, Bills Receivable, Notes Receivable, all raw and partly manufactured materials for use in the manufacture of products by the Company, all work in process of such manufacture, all products so manufactured or purchased to be sold by the Company in the course of its business, and all earnings, profits and income lawfully used or to be used for the payment of dividends to stockholders or for the creation of a surplus, and it is expressly agreed that all property excepted as aforesaid shall be free from the lien of this indenture, notwithstanding anything to the contrary herein contained.

TO HAVE AND TO HOLD ALL and singular the above granted and described premises, goods, chattels, and property, with the appurtenances therunto belonging, according to the several natures and characters thereof unto the said Trustee, its successors and assigns, forever, IN TRUST, nevertheless, for the equal and proportionate benefit and security of all present and future holders of the bonds, issued and to be issued hereunder, and for the enforcement of the payment of such bonds when payable, and to secure the performance of and the compliance with the covenants and conditions of

this indenture, without preference, priority or distinction as to lien or otherwise, of any one bond over any other bond by reason of priority in the issue or negotiation thereof, or by reason of any other cause; so that each and every bond issued and to be issued as aforesaid shall have the same right, lien and privilege, under this indenture as every other bond, and so that the principal and interest of every such bond shall, subject to the terms hereof, be secured hereby equally and proportionately with every other bond as if all had been made, executed, delivered and negotiated simultaneously with the execution and delivery of this indenture; it being intended that the lien and security of this indenture and of all bonds issued hereunder shall take effect from the day of the date hereof as though upon such day all of such bonds were actually issued, executed and delivered to and were outstanding in the hands of innocent purchasers for value. And it is hereby expressly covenanted and declared that all of said bonds are to be issued, certified, delivered and held, and that the mortgaged property is to be held by the Trustee, subject to the following further covenants, conditions and provisions, namely:

ARTICLE I.

GENERAL PROVISIONS.

Section 1. The amount of bonds secured by this mortgage which may be issued by the Company and certified by the Trustee is limited to the aggregate principal sum of Two Million Dollars.

Section 2. Each of the bonds issued hereunder shall be substantially of the form and tenor hereinbefore set forth and for the principal sum of One Thousand Dollars (\$1,000). The dates of maturity of the several bonds shall be as follows, to wit:-

Nos.	1 to	50 inclusive shall mature September 1, 1917.
Nos.	51 to	60 inclusive shall mature March 1, 1918.
Nos.	61 to	90 inclusive shall mature September 1, 1918.
Nos.	91 to	120 inclusive shall mature March 1, 1919.

Nos. 121 to 180 inclusive shall mature September 1, 1919.
 Nos. 181 to 210 inclusive shall mature March 1, 1920.
 Nos. 211 to 240 inclusive shall mature September 1, 1920.
 Nos. 241 to 270 inclusive shall mature March 1, 1921.
 Nos. 271 to 300 inclusive shall mature September 1, 1921.
 Nos. 301 to 330 inclusive shall mature March 1, 1922.
 Nos. 331 to 360 inclusive shall mature September 1, 1922.
 Nos. 361 to 390 inclusive shall mature March 1, 1923.
 Nos. 391 to 420 inclusive shall mature September 1, 1923.
 Nos. 421 to 450 inclusive shall mature March 1, 1924.
 Nos. 451 to 480 inclusive shall mature September 1, 1924.
 Nos. 481 to 510 inclusive shall mature March 1, 1925.
 Nos. 511 to 540 inclusive shall mature September 1, 1925.
 Nos. 541 to 570 inclusive shall mature March 1, 1926.
 Nos. 571 to 600 inclusive shall mature September 1, 1926.
 Nos. 601 to 630 inclusive shall mature March 1, 1927.
 Nos. 631 to 660 inclusive shall mature September 1, 1927.
 Nos. 661 to 690 inclusive shall mature March 1, 1928.
 Nos. 691 to 720 inclusive shall mature September 1, 1928.
 Nos. 721 to 750 inclusive shall mature March 1, 1929.
 Nos. 751 to 780 inclusive shall mature September 1, 1929.
 Nos. 781 to 810 inclusive shall mature March 1, 1930.
 Nos. 811 to 840 inclusive shall mature September 1, 1930.
 Nos. 841 to 870 inclusive shall mature March 1, 1931.
 Nos. 871 to 900 inclusive shall mature September 1, 1931.
 Nos. 901 to 930 inclusive shall mature March 1, 1932.
 Nos. 931 to 960 inclusive shall mature September 1, 1932.
 Nos. 961 to 990 inclusive shall mature March 1, 1933.
 Nos. 991 to 1020 inclusive shall mature September 1, 1933.
 Nos. 1021 to 1050 inclusive shall mature March 1, 1934.
 Nos. 1051 to 1080 inclusive shall mature September 1, 1934.
 Nos. 1081 to 1110 inclusive shall mature March 1, 1935.
 Nos. 1111 to 1140 inclusive shall mature September 1, 1935.
 Nos. 1141 to 1170 inclusive shall mature March 1, 1936.
 Nos. 1171 to 1200 inclusive shall mature September 1, 1936.
 Nos. 1201 to 1230 inclusive shall mature March 1, 1937.
 Nos. 1231 to 1260 inclusive shall mature September 1, 1937.
 Nos. 1261 to 1290 inclusive shall mature March 1, 1938.
 Nos. 1291 to 1320 inclusive shall mature September 1, 1938.
 Nos. 1321 to 1350 inclusive shall mature March 1, 1939.
 Nos. 1351 to 1380 inclusive shall mature September 1, 1939.
 Nos. 1381 to 1410 inclusive shall mature March 1, 1940.
 Nos. 1411 to 1440 inclusive shall mature September 1, 1940.
 Nos. 1441 to 2000 inclusive shall mature March 1, 1941.

Section 3. The bonds issued hereunder shall be issued in the name
 and on behalf of the Company by its Vice-President and Financial Executive
 and shall be sealed with its corporate seal, attested by its Secretary, and
 all coupons shall be authenticated by the facsimile signature of the present
 or any future Treasurer of the Company. The bonds and coupons so executed shall

be deemed obligatory for all purposes without regard to the fact that the officers executing said bonds or the officer whose facsimile signature shall appear on the coupons or any of them shall have ceased to be such officer at the date of the actual certification and issuance of said bonds.

Section 4. The bonds hereby secured shall be executed, certified and delivered as coupon bonds. Before certifying and delivering any bond hereby secured, all coupons thereof then matured shall be detached. The bonds shall be dated September 1, 1916. Only such of the bonds as shall bear thereon a certificate substantially of the form hereinbefore recited, duly executed by the Trustee, shall be secured by this indenture or shall be entitled to any benefit hereunder. No bond nor any coupon thereunto appertaining shall be valid for any purpose until such certificate shall have been duly endorsed on such bond. Every such certificate of the Trustee on any bond executed by the Company shall be conclusive and the only evidence that the bond so certified was duly issued hereunder and that the same is entitled to the trust hereby created.

Section 5. Unless registered as to principal, as herein provided, the bonds shall pass by delivery. The holder of any bond issued hereunder, however, may have the ownership thereof registered as to principal only in books to be kept by the Company for the purpose at its office in West Orange, Essex County, New Jersey. Such registry shall be noted on the bond, and thereafter no transfer thereof shall be valid unless made on such books by the registered owner in person or by his attorney duly authorized in writing and similarly noted on the bond; but such bond may be discharged from registry by being in like manner transferred to bearer and thereupon transferability by delivery shall be restored; and again from time to time any bond may be registered or transferred to bearer as before. Such registration, however,

shall not effect the negotiability of the coupons which shall always be transferable by delivery merely, and payable to bearer.

Section 6. In case any bond issued hereunder with the coupons thereto appertaining, shall become mutilated or be lost or be destroyed, the Company in its discretion may execute, and thereupon the Trustee shall certify and deliver a new bond of like tenor, date and amount and bearing the same serial number, in exchange and substitution for and upon cancellation of the mutilated bond and its coupons, or in lieu of and in substitution for the bond and its coupons so lost or destroyed, upon receipt of evidence satisfactory to the Company and to the Trustee of the loss or destruction of such bond and its coupons and upon receipt also of indemnity satisfactory to the Company and to the Trustee. The Trustee shall not be liable for anything done by it in good faith under the provisions of this section. At the time of delivery of any new bond pursuant to the provisions of this section, the owner of such mutilated or lost or destroyed bond shall reimburse the Company for any reasonable expense incurred by the Company, including counsel fees and the charges of the Trustee in connection with the execution and certification of such new bond, and also for any stamp tax or governmental charge incidental to the execution, certification and delivery of such new bond.

Section 7. Until said bonds have been engraved or lithographed in definitive form, the Company may issue and deliver in its discretion temporary bonds without coupons in lieu thereof, substantially of the tenor of the bonds to be issued as hereinbefore recited except in respect to denomination and with appropriate variations in form and denomination, and exchangeable for definitive bond or bonds of equal face value when ready for delivery. The temporary bonds so issued shall be payable to bearer and shall bear thereon certificates substantially in the form hereinbefore recited,

duly executed by the Trustee. Every temporary bond so issued shall be subject to all the provisions and entitled to all the security of this indenture and when and as any interest is paid upon such temporary bond, such payment shall be noted thereon.

Section 8. The bonds secured by this mortgage are and shall be redeemable on the first day of September, 1917 or at any interest date thereafter at one hundred and five percent (105%) of the face value thereof and accrued interest, at the pleasure of the Company expressed by resolution of its Board of Directors; said redemption to be made as follows:- Whenever the Board of Directors of the Company shall desire to redeem any of such bonds, they shall pass a resolution setting forth the amount of bonds (at their par value) desired to be redeemed, and the serial numbers of the bonds to be redeemed shall be drawn, by lot in such manner as the Trustee may determine, at least fifty days before the date upon which the bonds so drawn are to be redeemed, said drawing in each case to be made first only from the group of bonds then outstanding having the latest maturity date. If the number of bonds then outstanding of the group having the latest maturity date shall be equal to or less than the number of bonds which it is then desired to redeem, all of the then outstanding bonds of such group shall be redeemed, and any additional bonds which are to be then redeemed shall be determined by drawing by lot from the serial numbers of the group having the next latest date of maturity, it being the intention in every case that no bond shall be drawn for redemption under the provisions of this paragraph so long as there is any bond having a later maturity outstanding and not drawn for redemption. When the numbers of the said bonds shall have been drawn as aforesaid, the Company shall cause notice to be published at least twice a week during the six weeks

next preceding the date upon which the bonds so drawn are to be redeemed and retired, in one daily newspaper published in the City of Newark, New Jersey, and the Borough of Manhattan, City of New York, N. Y., respectively giving the numbers of the bonds to be redeemed as aforesaid, and shall notify the registered holders of such of said bonds to be redeemed as are registered, by depositing such notice in the Post Office, postage prepaid, addressed to their addresses as the same appear on the books of the Company, six weeks before the time designated for redeeming and retiring said bonds, and the principal of such bonds to be so redeemed shall become due and payable on the next interest date following the date of the aforesaid drawing in the same manner as if such bonds had matured according to the conditions thereof, and on presentation and surrender of said bonds and all coupons thereof coming due after said interest date at the office of the Company at West Orange aforesaid, the principal of said bonds together with five percent (5%), thereof additional as a premium for advance payment shall be paid to the lawful holder thereof. If any of the said bonds so called shall not be presented for payment as aforesaid at the place and on the date that the same are made payable, the Company may deposit the aforesaid redemption price of said bonds with the Trustee in trust for the lawful owner of said bonds, and such deposit shall be deemed to be a redemption of such bonds and a full performance of this covenant so far as said bonds are concerned, and the Company shall be released and discharged from any further liability on account of said bonds and the coupons thereof thereafter becoming due.

Interest on bonds called for redemption under the provisions of this section shall cease and determine from and after the date appointed for their redemption.

ARTICLE II.

CONDITIONS OF THE ISSUE OF BONDS

At any time after the execution of this indenture the bonds issuable hereunder shall be executed by the Company and certified by the Trustee, either all at one time or from time to time, and when so certified shall be delivered to the Treasurer of the Company to be sold or otherwise disposed of by him at such price or for such purpose in conformity with this indenture as the Board of Directors by resolution may designate. The moneys realized from the sale of said bonds shall be used and applied as follows, to-wit: First, to the discharge of the outstanding bonded indebtedness of the Company which matured July 1, 1916, and then for the purposes set forth in the preamble hereof.

ARTICLE III.

PARTICULAR COVENANTS OF THE COMPANY.

Section 1. The Company will pay at its office in West Orange, Essex County, New Jersey, the principal of the bonds issued hereunder according to the tenor thereof when the principal shall become due and payable upon the surrender of the bonds and will pay also at said office the interest thereon according to the tenor of the coupons until the principal is paid, and without any deduction for any tax or taxes or stamp dues (other than succession, inheritance or estate taxes) which the Company or the Trustee may be required to pay thereon or to retain or deduct therefrom under any present or future law of the United States of America or of any State, County, Municipality or other taxing authority thereof. The interest on the bonds shall be payable only upon presentation and surrender of the several coupons for such interest, as they respectively mature.

Section 2. The Company covenants and agrees that when and as said bonds and interest coupons mature as therein and herein provided, the said bonds and the interest coupons shall be paid and cancelled respectively, and that no bonds or interest coupons in substitution therefor shall be issued, and that no purchase or sale of said interest coupons or of said bonds, or advance or loans upon the same made by or on behalf of, or at the request of, or with the privity of the Company, shall operate to keep the said bonds or said interest coupons, or any of them, alive or in force as against the holders of the other bonds issued hereunder and the interest coupons appertaining thereto, whether said other bonds and interest coupons be then matured or unmatured; nor shall the Company extend or consent to the extension of the time of payment of the principal of said bonds or of any interest coupon, and if such extension shall be made, such principal or such interest coupons shall be subject to the prior payment in full of the principal of the other bonds and interest coupons whose payment shall not have been extended, whether such bonds and interest coupons be then matured or unmatured.

Section 3. The Company will keep or cause to be kept at its office in West Orange, Essex County, New Jersey books in which may be registered or transferred any bond or bonds entitled to registration or transfer under the provisions of this indenture.

Section 4. The Company covenants that it is lawfully seised and possessed of the mortgaged premises and of the goods and chattels herein mortgaged, and that the same are free and clear of all encumbrances; that it has a good right and lawful authority to sell, assign, transfer, mortgage and convey the mortgaged premises as provided in and by this indenture; that it will warrant and defend the same to the Trustee for the benefit of

the holders of the bonds issued hereunder against the claims and demands of all persons whatsoever; that this mortgage is and will always be kept a first lien upon all the mortgaged property, and similarly upon all renewals, substitutions and replacements of such property, and all additions, extensions, betterments and improvements thereto and thereof; and that it will not voluntarily create or suffer to be created, or allow to accrue or to exist any lien or charge having priority to or preference over the lien of this indenture upon the mortgaged property or any part thereof.

Section 5. The Company further covenants that it will duly record and file these presents as may be required by law in order to preserve the lien of the same as a mortgage of both real and personal property on all the mortgaged property, and will furnish evidence of such recording and filing to the Trustee, and will furnish similar evidence of the recording and filing of every additional instrument which shall be necessary to preserve the lien of such presents upon all such property until the principal and interest of all bonds hereby secured shall have been paid.

Section 6. The Company further covenants that it, its successors and assigns, and each and every person having or holding any estate, right, title or interest from the Company in and to the mortgaged property, will at its own expense from time to time on written demand of the Trustee, make, do, execute, acknowledge and deliver all such acts, deeds, conveyances, assignments, mortgages or other instruments and assurances in the law as may be reasonably required for in all respects effectuating the intention of these presents, and for the better assuring or confirming unto the Trustee upon the trusts and for the purposes herein expressed, all the mortgaged property hereinabove described or hereafter to be

acquired. The Trustee may, at any time, accept any conveyance, mortgage, assignment or transfer of any property, real or personal, which any person or corporation may make and deliver to said Trustee for or on behalf of the Company; and the property so conveyed, mortgaged, assigned or transferred, if and when the conveyance, mortgage, transfer or assignment thereof shall be accepted by the Trustee, shall thereupon become subject to the lien of this indenture and a part of the mortgaged property.

Section 7. The Company from time to time will pay and discharge all taxes, assessments and governmental charges lawfully imposed upon the mortgaged property, and upon any part thereof, or upon the income and profits thereof, and also all taxes, assessments and governmental charges lawfully imposed upon the lien or interest of the Trustee therein so that the lien and property of this indenture shall be fully preserved at the cost of the Company without expense to the Trustee or the bondholders, and shall and will, when thereunto requested, provide and show the Trustee proper receipts and vouchers for such taxes. Should the Company fail to pay any such taxes, charges, assessments or liens, or suffer any lien to attach, the Trustee may pay and discharge the same (but the Trustee shall be under no duty so to do), and shall have a lien for any and all payments so made and for interest thereon prior to the lien of these presents on the mortgaged property, and the Company shall on demand repay all amounts paid by the Trustee for any such purpose with interest thereon; provided, however, that the Company shall have the right to contest in good faith by legal proceedings any such tax, assessment, or charge, and pending said contest may delay and defer the payment thereof unless, in the opinion of the Trustee, the rights and security of the holders of the bonds hereby secured shall be materially endangered.

Section 8. The Company covenants and agrees that it will so long as any of the bonds hereby secured are outstanding and unpaid, keep the buildings, machinery and appurtenances and all personal property hereby mortgaged or intended so to be insured in good and solvent companies against loss or damage by fire to the extent that such property is usually insured, and shall pay all premiums upon the insurance policies; all losses, if any, under such policies of insurance to be payable to the Trustees for the benefit of the several holders of the bonds hereby secured, and shall be used with the approval of the Company in repairing or replacing the property so damaged or destroyed, or expended for the betterment of the plant and in repairing and improving the other property covered by this mortgage. Instead of the foregoing provision for insurance protection, the Company may adopt such other plan or method of protection against loss by fire, whether by the establishment of an insurance fund or otherwise, as may be approved by its Board of Directors. The Company shall be required under all circumstances to maintain insurance as aforesaid upon the property hereby mortgaged to an amount equal to at least fifty percent (50%) of the outstanding bonds secured hereby.

Section 9. The Company covenants that it will at all times at its own expense, maintain and keep in good condition and repair the buildings and fixtures now or hereafter erected upon the mortgaged premises, and the machinery, tools, patterns, furnaces, tanks, pumps, fittings, appliances, apparatus, implements, office furniture and fixtures therein hereby mortgaged or intended so to be, and will repair or replace the same if damaged or destroyed by fire or the elements.

Section 10. The Company covenants that it will do all things

necessary under the laws now in force or hereafter enacted to preserve its corporate organization during the term fixed by its charter, and that it will do no act by which it will incur a forfeiture of its corporate existence, and that it will duly observe all lawful statutes, rules, regulations and orders of any public authority having jurisdiction over the mortgaged property, or any part thereof.

Section 11. The Company will not negotiate, sell or dispose of any bonds hereby secured in any manner other than in accordance with the provisions of this indenture, and the agreements in that behalf herein contained; and in issuing, selling, negotiating or otherwise disposing of such bonds from time to time, it will well and truly apply or cause to be applied the proceeds thereof as herein provided, and in no other or different way; but no purchaser of any bond issued hereunder shall be under any obligation to see to the application of the proceeds thereof.

Section 12. The Company shall cause an annual audit to be made of its affairs, assets and business as of the last day of February of each year by a certified public accountant approved of by the Trustee, and deliver a copy thereof, signed by the auditor, to the Trustee not later than the first day of July in each year. Until the payment in full of the principal and interest of the bonds secured by this mortgage, no dividend shall be declared on the capital stock of the Company unless a copy of the audit for the preceding year, (ending the last day of February) shall have been delivered to the Trustee, and there shall be no dividend for any year on the said capital stock of the Company in excess of twelve percent (12%), unless it shall appear by the said audit that the surplus and undivided profits of the Company are equal in amount to the aggregate of the principal of the then

outstanding bonds secured by this mortgage, with the unpaid matured coupons of said bonds. And provided further that the aggregate of all dividends for any fiscal year shall not exceed fifty percent (50%) of the net profits arising from the business of the Company during the year for which such dividend or dividends is or are declared.

ARTICLE IV.

RIGHTS OF THE COMPANY UNTIL DEFAULT.

Section 1. Until the occurrence of one of the events of default specified in Section 2 of Article V of this indenture, the Company, its successors and assigns shall be suffered and permitted to retain and remain in full possession of the property, real and personal, hereby mortgaged, and shall be permitted to manage, operate and use the same and every part thereof with the rights appertaining thereto, and also to collect, receive, take, use and enjoy the earnings, income, rents, issues and profits thereof. Furthermore, the Company shall have the right at all times as the proper management of its business may require, to alter, change, add to, repair, remove and replace the machinery, patterns, drawings, tools, furnaces, tanks, pumps, plating, electrical and other apparatus, boilers, implements, fixtures, fittings, factory appliances, office furniture and fixtures and other appurtenances in the works and buildings now constructed or which shall hereafter be constructed and owned by the Company and conveyed or intended to be conveyed hereby to the Trustee, provided that the security of said bonds shall not thereby be in any wise reduced or impaired.

Section 2. At any time while the Company is not in default hereunder it may remove any building now or hereafter erected upon the mortgaged premises for the purpose of replacing the said building so removed with a

structure which shall cost not less to construct than the building so removed; provided that in each case before beginning the removal of the existing structure, the plans and specifications for the new proposed structure shall be submitted to and approved by the Trustees, and that the Company shall file with the Trustee a bond of indemnity satisfactory in form and sufficiency to the Trustee to cover the erection of said new building, free from any liens or claims incident to the construction thereof.

Section 3. The Company may, without the consent of the Trustee, sell or otherwise dispose of any of said machinery, patterns, drawings, tools, furnaces, tanks, pumps, plating, electrical and other apparatus, boilers, implements, fixtures, fittings, factory appliances, office furniture and fixtures and appurtenances and personal assets which are not necessary or required for the operation of its plant and property or for the carrying on of its business or which may hereafter become worn or damaged or otherwise unsuitable for any of its corporate purposes; provided, that it shall substitute therefor, subject to the lien of those presents and free from any prior lien or charges, property of approximately equal value so that the security of said bonds shall not thereby be in any wise reduced or impaired.

Section 4. The Company shall have the further right at all times to convey or exchange, free from the encumbrances and trusts hereof, all or any of the real estate now held or hereafter acquired by the Company which shall no longer be either useful or necessary in the proper management and maintenance of the business of the Company or of the property hereby conveyed, but in no case shall any sale or other disposition of such real estate be made without the express consent in writing of the Trustee, and

the Trustee is hereby expressly authorized to release from the operation and effect of this mortgage any property so sold or exchanged, whether the consideration of such sale be wholly cash or partly cash and partly secured by mortgage on the premises sold, but the property taken in exchange, if such there be, shall forthwith become and be liable under this mortgage as if the same had been originally included therein, and the net proceeds of real estate so released (if sold) shall be applied by the Company in good faith to the betterment or extension of the plants owned or controlled by it; provided, however, that if in the opinion of the Company it shall not be consistent with the best interests of the business of the Company to apply the whole or any part of such proceeds to such betterment or extension, then the Company shall have the right, to use the whole or any part of such proceeds remaining unexpended, for the redemption and retirement, in the manner provided for in Section 8 of Article I hereof, of outstanding bonds secured hereby.

Section 5. Until the occurrence of one of the events of default specified in Section 2 of Article 7 of this indenture, the Company and its successors shall have the exclusive right to make and use the inventions of the Letters Patent and applications for Letters Patent hereby mortgaged, and to sell apparatus, machines, manufactures and compositions of matter embodying the inventions thereof to the same extent as if this mortgage had not been made.

Whenever the Board of Directors of the Company shall determine by resolution that the Company considers it necessary or advisable to institute any suit or action for infringement of any of the patents hereby mortgaged or any reissues or extensions of the same, or of any patents which may hereafter be issued upon the applications for Letters Patent hereby mort-

gaged or any reissues or extensions of the same, and shall by resolution request, direct or authorize the institution of such suit or action, and shall furnish to the Trustee a certified copy of such resolution or resolutions, and shall indemnify the Trustee to its satisfaction against any and all liability of the Trustee for damage or loss because of the institution, prosecution and conduct of such suit or action, then and in such event the Trustee shall permit and authorize the Company to institute, prosecute and conduct such suit or action either in the name of the Company, the Trustee, or the Company and Trustee jointly, as counsel for the Company may advise, and in such event the Trustee shall execute such papers as counsel learned in the law may advise to be necessary or desirable for the instituting, prosecuting and conducting of such suit or action.

Notwithstanding the provisions in this mortgage contained, the Company shall have power to grant licenses under any and all of the patents hereby mortgaged and any and all reissues and extensions of the same and under any and all patents which may hereafter be issued upon any and all applications for Letters Patent hereby mortgaged and any and all reissues and extensions of the same, and the Trustee shall release its rights and title to the patent or patents under which such license or licenses are to be granted or to such portion of said rights as may be necessary to enable the Company to grant such license or licenses and shall reassign to the Company any such patent or patents or convey to it such portions of the rights in such patent or patents as may be necessary to enable the Company to grant such license or licenses, provided always that the Trustee shall not be required to make and deliver any such release, assignment or conveyance as herein provided for until the Company, through its Board of Directors, shall by resolution have determined that it is advisable and to

the best interest of the Company to grant such license or licenses and that the security of the bondholders under this mortgage will suffer no substantial diminution by the making of such grant of license or licenses, and by resolution shall request the Trustee to execute such release, assignment or conveyance and shall have delivered to the Trustee a certified copy of such resolution or resolutions.

Section 6. If the Company shall well and truly pay or cause to be paid the whole amount of the principal moneys and interest due upon all of the bonds and coupons for interest hereby secured at the time and in the manner and form therein and herein provided, and also shall pay or cause to be paid all other sums payable hereunder by the Company and shall well and truly keep and perform all things herein required to be kept and performed by it, according to the true intent and meaning of this indenture, then and in that case all the mortgaged premises and property shall revert to the Company, and all the estate, right, title and interest therein of the Trustee shall thereupon cease and determine; and the Trustee in such case, upon demand of the Company, but at the cost and expense of the Company, shall enter or cause to be entered satisfaction of this indenture upon the records; otherwise these presents shall be continued and remain in full force and virtue.

ARTICLE V.

REMEDIES OF TRUSTEE AND BONDHOLDERS IN CASE OF DEFAULT.

Section 1. No coupon belonging to any bond hereby secured which in any way at or after maturity shall have been transferred or presented separate and apart from the bond to which it relates shall, unless accompanied by such bond, be entitled in case of default hereunder to any benefit of or from this indenture except after the prior payment in full of

the principal of the bonds issued hereunder and of all coupons and interest obligations not so transferred or presented.

Section 2. In case of the happening of one or more of the following events hereinafter (after the lapse of the times respectively specified in the following subdivisions) called "Events of Default," that is to say:-

- (1) Default in payment of any installment of interest on any of the bonds hereby secured, when and as the same shall become payable as therein and herein expressed, which default shall have been continued for the period of sixty days.
- (2) Default in the payment of the principal of any of the bonds hereby secured when the same shall become due and payable at the maturity of said bonds or otherwise.
- (3) Default in the due observance or performance of Section 12 of Article III hereof.
- (4) Default in the due observance or performance of any other covenant or condition herein required to be kept or performed by the Company, which default shall have continued for a period of three months after written notice thereof shall have been given to the Company by the Trustee or by the holders of ten percent. in amount of the bonds hereby secured and then outstanding.
- (5) The actual or threatened demolition or removal of any building erected upon the mortgaged premises except as provided in Section 2 of Article IV hereof.
- (6) A receiver of the property of the Company, or a Trustee in Bankruptcy shall have entered into possession of the mortgaged premises or any part thereof;

Then and in each such case the Trustee may, and upon the written

request of the holders of one-third in amount of the bonds hereby secured and then outstanding, shall, by notice in writing delivered to the Company, declare the principal of all bonds hereby secured and then outstanding to be due and payable immediately, and upon any such declaration the said principal shall become and be due and payable immediately, anything in this indenture or in such bonds to the contrary notwithstanding.

This provision, however, is subject to the condition that if at any time after the principal of such bonds shall have been so declared due and payable and before any sale of the mortgaged premises and property shall have been made pursuant to the provisions of Section 4 of this Article, all arrears of interest upon all the bonds secured hereby, with interest on overdue installments of interest at the rate of six per cent per annum, together with all expenses and reasonable charges of the Trustee and all advances made by the Trustee in accordance with the terms and conditions of this indenture shall either be paid by the Company or be collected out of the mortgaged property, and all defaults as aforesaid shall have been made good, then and in such case the holders of a majority in amount of the bonds hereby secured and then outstanding, by written notice to the Company and to the Trustee, may waive such default and rescind or annul such declaration or its consequences; but no such waiver or rescission shall extend to or affect any subsequent default or impair any like consequence thereof.

Section 3. In case of the happening of any of the events of default specified in Section 2 of this Article, then and in each and every such case of default the Trustee, personally or by Attorney, may enter upon and take and maintain possession of all or any part of the mortgaged premises and property, and may exclude the Company, its agents and servants, wholly therefrom, and as the Attorney in fact or agent of the Company or

in its own name as Trustee, by any of its officers or by any agent duly appointed, or by managers, superintendents, receivers and servants may have, hold, use, manage, operate and enjoy the same and every part thereof to as full an extent as the Company might lawfully do, making from time to time all needful and proper additions, alterations and repairs and receive all the income, rents, issues and profits therefrom, and after deducting and defraying the expense of such use, operation, additions, alterations and repairs and the costs and charges of taking such possession and all payments which may be made for taxes, assessments, charges or liens prior to the lien of this indenture upon said mortgaged property, or any part or parcel thereof, or for insurance and any and all expenses incurred by the Trustee in the execution of any of the powers or trusts under these presents, together with any and all advances by the Trustee hereunder in accordance with the terms and conditions of this indenture, as well as reasonable remuneration for the services of the Trustee, its agents, attorneys, clerks and servants, the Trustee shall apply the residue of the moneys so received as follows:-

1. If the principal of all the bonds then outstanding hereunder shall not at the time of such default have become due and payable by reason of maturity of all such bonds or by declaration as authorized by Section 2 of this Article, then to the payment of interest then in arrears and payable on all the bonds in the order in which the installments of such interest shall have become due and payable, with interest at the rate of six per cent. per annum on such overdue installments of interest, and next, to the payment of the principal of such bonds as shall have matured and become due and payable in the order in which such bonds shall have become due and payable, with interest on the overdue principal at the rate of six per cent. per annum, subject, however, to the provisions of Section 1 of this Article.

2. If the principal of all the bonds then outstanding hereunder shall, at the time of such default have become due and payable, either by reason of maturity thereof or by declaration as authorized by Section 2 of this Article, then retably to the payment of said principal and of the interest then due and accrued on said bonds, with interest at the rate of six percent, per annum on the overdue installments of principal and interest, but without preference or priority of principal over interest or interest over principal, subject, however, to the provisions of Section 1 of this article.

And, in case all such payments, expenses and indemnity shall be completely made or furnished and there shall have been no default in respect to Section 12 of Article III of this agreement, and every other default of the Company shall have been made good before any foreclosure and sale, the Trustee, after making such provision as it may deem advisable for the payment of the principal of the next maturing bonds, and for the payment of the next semi-annual installment of interest upon all the bonds, shall restore to the Company possession of the mortgaged premises and properties so entered upon and taken possession of by the Trustee, and the same shall thenceforth be subject to the provisions of these presents in the same manner as if such entry had not been made.

Section 4. Upon the happening of any event of default as defined in Section 2 of this Article, the Trustee, personally or by attorney, with or without taking possession of the mortgaged premises and property (1) may sell to the highest and best bidder, all and singular, the mortgaged premises and property and all right, title, interest, claim and demand therein and the right of redemption thereof in one lot and as an

entirety, or in separate lots as the Trustee shall deem best, which sale shall be made at public auction at such price or prices and at such time and times and upon such terms as the Trustee may fix and briefly specify in the notice of sale to be given as herein provided or as may be required by law; or (2) may proceed to protect and to enforce its rights and the rights of the bondholders under this indenture by a suit or suits in equity or at law, whether for the specific performance of any covenant or agreement contained herein or in aid of the execution of any power herein granted, or for a foreclosure hereunder, or for the enforcement of any other appropriate legal or equitable remedy as the Trustee, being advised by counsel, shall deem most effectual to protect and enforce any of the rights or duties hereunder; or (3) may proceed by both such sale and by such suit or suits.

Section 5. The purchase money, proceeds and avails of any such sale of the mortgaged property or any part thereof, together with any other sums which then may be held by the Trustee under any of the provisions of this indenture as a part of the mortgaged property, or of the proceeds thereof, shall be applied as follows:

1. To the payment of the costs and expenses of the foreclosure or other proceedings in connection with such sale, including a reasonable compensation to the Trustee, its agents, attorneys and counsel, and of all other expenses, liabilities and advancements made or incurred by the Trustee hereunder.
2. To the payment of the whole amount then owing or unpaid upon the bonds hereby secured and then outstanding, for principal and interest, with interest at the rate of six per cent. per annum on the overdue installments of principal and interest, and in case such proceeds shall be

insufficient to pay the whole amount so due and unpaid, then to the payment of such principal and interest, without preference or priority of principal over interest or of interest over principal, or of any installment of interest over any other installment of interest, or of the principal of any one bond over any other bond, ratably to the aggregate of such principal and the accrued and unpaid interest upon presentation of the several bonds and coupons, and stamp thereon such payment if only partially, and upon surrender thereof if fully paid, subject, however, to the provisions of Section 1 of this Article; and

3. The surplus, if any, shall be paid to the Company, its successors or assigns, or to whomsoever may be lawfully entitled to receive the same.

Section 6. Upon the written request of the holders of one-third in amount of the bonds hereby secured and then outstanding, in the case of the happening of any event of default as specified in Section 2 of this Article, it shall be the duty of the Trustee upon being indemnified as hereinafter provided, to take all steps needful for the protection and enforcement of its rights and the rights of the holders of the bonds hereby secured; and to exercise the power of entry or sale herein conferred, or both, or take appropriate judicial proceedings by action, suit or otherwise, as the Trustee, being advised by counsel, shall deem most expedient in the interest of the holders of the bonds hereby secured; but anything in this indenture to the contrary notwithstanding, the holders of two-thirds of the amount of the bonds hereby secured and then outstanding from time to time shall have the right to direct and to control the action of the Trustee and the method and place of conducting all proceedings for any sale of the premises and property subject to this indenture, or for the foreclosure of

this indenture, or the appointment of a Receiver, or any other proceedings hereunder.

Section 7. In case the Trustee shall have proceeded to enforce any right under this indenture by foreclosure, entry, or otherwise, and such proceedings shall have been discontinued or abandoned because of the waiver mentioned in Section 2 of Article V hereof, or for any other reason, or shall have been determined adversely to the Trustee, then, and in every such case, the Company and Trustee shall be restored to their former position and rights hereunder in respect to the mortgaged premises and property and all rights, remedies and powers of the Trustee shall continue as though no such proceedings shall have been taken.

Section 8. Notice of any sale pursuant to any provision of this indenture shall state the time and place when and where the same is to be made, and shall contain a brief description of the property to be sold and such other particulars, if any, as may be required by law, and shall be sufficiently given if published once in each week for four successive weeks prior to such sale in a newspaper published in the City of Newark, New Jersey, and in a newspaper published in the Borough of Manhattan in the City and State of New York, and in such other manner as may be required by law.

Section 9. The Trustee from time to time may adjourn any sale to be made under the provisions of this indenture by announcement at the time and place appointed for such sale or for such adjourned sale or sales; and without further notice or publication except such, if any, as may be required by law, may make such sale at the time and place to which the same shall be so adjourned.

Section 10. Upon the completion of any sale or sales under this indenture, the Trustee shall execute and deliver to the accepted purchaser or purchasers a good and sufficient deed or good and sufficient deeds and other instruments conveying, assigning and transferring the property so sold. The Trustee is hereby appointed the true and lawful attorney of the Company in its name and stead to make all necessary conveyances and assignments of the property thus sold; and for that purpose it may execute all necessary deeds and instruments of assignment and transfer and may substitute one or more persons with like power; the Company hereby ratifying and confirming all that its said attorney, or such substitute or substitutes shall lawfully do by virtue hereof.

Any such sale or sales made under or by virtue of this indenture, whether under the power of sale herein granted and conferred or under or by virtue of judicial proceedings shall operate to divest all right, title, interest, claim and demand whatsoever either at law or in equity of the Company, of, in and to the premises and property so sold, and shall be a perpetual bar, both at law and in equity, against the Company, its successors and assigns, and against any and all persons claiming or to claim the premises or property sold or any part thereof from, through or under the Company, its successors or assigns. The receipt of any person authorized to receive payment of the purchase money paid at any such sale shall be a sufficient discharge therefor to any purchaser of the property or any part thereof sold as aforesaid; and after paying such purchase money and receiving such receipt no such purchaser or his representatives, grantees, or assigns, shall be bound to see to the application of such purchase money upon or for any trust or purpose of this indenture, or in any manner whatsoever shall be answerable for any loss, misapplication or non-application

of any such purchase money or any part thereof or shall be bound to inquire as to the authorization, necessity, expediency or regularity of any such sale.

Section 11. In the case of sale under or by virtue of this indenture, whether made under the power of sale herein granted or pursuant to judicial proceedings, the principal of all the bonds hereby secured, if not previously due, shall at once become and shall be due and payable, anything in said bonds or in this indenture to the contrary notwithstanding.

Section 12. Upon any sale as aforesaid by the Trustee, or pursuant to judicial proceedings, the Trustee or any bondholder or any other person, may bid for and may become the purchaser of the property offered for sale, or any part thereof, for themselves or himself, without accountability in respect thereof, except for payment of the purchase price and compliance with the terms of sale. In settlement or payment of such purchase price, any purchaser upon presenting any of said bonds or interest coupons shall be entitled to be credited on account of the purchase price with a sum which would, upon a proper distribution and accounting of the proceeds of the sale, as herein provided, and after providing in cash for all costs, expenses and proper charges of the Trustee hereunder, be equal to the distributive share payable out of such proceeds to the holder of the bonds or coupons so presented, which amount so credited shall be stamped or indorsed on such bonds or coupons so presented, as paid thereon.

Section 13. The Company will not at any time insist upon or plead or in any manner whatever claim or take the benefit or advantage of any stay or extension of law now or at any time hereafter in force, nor will

it claim, take or insist upon any privilege or advantage from any law now or hereafter in force providing for the valuation or appraisement of the property, or any part of the property, subject to this indenture prior to any sale or sales thereof to be made pursuant to any provision herein contained or to the decree, judgment or order of any court of competent jurisdiction, nor after any such sale or sales will it claim or exercise any right under any statute or otherwise to redeem the property so sold or any part thereof, and it hereby expressly waives all benefit and advantage of any such law or laws, and it covenants that it will not hinder, delay or impede the execution of any power herein granted and delegated to the Trustee, but that it will suffer and perform the execution of every such power as though no such law had been made or enacted.

Section 14. Upon filing a bill in equity or upon commencement of any other judicial proceedings to enforce any right of the Trustee or of the bondholders under this indenture, the Trustee shall be entitled to exercise the right of entry and also any and all other rights and powers herein conferred, and provided to be exercised by the Trustee upon the terms and conditions of default as herein provided; and as a matter of right the Trustee shall be entitled to the appointment of a receiver of the premises and property subject to this indenture and of the earnings, income, rents, issue and profits thereof, with such powers as the Court making such appointment shall confer.

Section 15. No holder of any bond or coupon thereon hereby secured shall have any right to institute any suit, action or proceeding in equity or at law for the foreclosure of this indenture or for the execution of any trust hereunder or for the appointment of a receiver or for any other

remedy hereunder unless the holders of one-third in amount of the bonds hereby secured then outstanding shall have made written request upon the Trustee to take action in respect of the matter complained of, and shall have afforded the Trustee a reasonable opportunity either to proceed to exercise the power hereinbefore granted or to institute such action, suit or proceeding in its own name; nor unless also they shall have offered to the Trustee security and indemnity satisfactory to it against the costs, expenses and liabilities to be incurred therein or thereby; nor shall any request as aforesaid be binding upon the Trustee or operative in accordance with the provisions of this indenture until, if required by the Trustee, the bonds of the holder or holders making such request are submitted to it for inspection or title thereto satisfactorily established, if disputed; nor unless the Trustee shall refuse or neglect to act upon such notice, request or indemnity, and such notification, request and offer of indemnity are hereby declared in every case, at the option of the Trustee, to be conditions precedent to the execution of the powers and trusts of this indenture for the benefit of the bondholders and to any action or course of action for foreclosure or for the appointment of a Receiver or for any other remedy hereunder; it being understood and intended that no one or more holder or holders of bonds or coupons, shall have any right in any manner whatever by his or their action to affect, disturb or prejudice the lien of this indenture, or to enforce any right hereunder except in the manner herein provided, and that all proceedings at law or in equity shall be instituted, had and maintained in the manner herein provided and for the equal benefit of all holders of such outstanding bonds.

All rights of action under this indenture or under any of said bonds enforceable by the Trustee, may be enforced by the Trustee without

the possession of any such bonds or the production thereof on the trial or other proceedings relative thereto, and any such suit or proceedings instituted by the Trustee may be brought in its own name, and any recovery shall be for the ratable benefit of the holders of said bonds.

Section 16. Except as herein expressly provided to the contrary, no remedy herein conferred upon or reserved to the Trustee or to the holders of the bonds hereby secured is intended to be exclusive of any other remedy or remedies, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing in law or in equity or by statute.

Section 17. No delay or omission of the Trustee or of any holder of bonds hereby secured to exercise any right or power accruing upon any default continuing as aforesaid shall impair any such right or power or shall be construed to be a waiver of any such default or an acquiescence therein, and every power and remedy given by this Article to the Trustee and to the bondholders may be exercised from time to time and as often as shall be deemed expedient by the Trustee or by the bondholders.

ARTICLE VI.

CONCERNING BONDHOLDERS.

Section 1. Any request, direction or other instrument required by this indenture to be signed and executed by the bondholders may be in any number of concurrent writings of the same tenor and may be signed and executed by such bondholders, in person or by agent appointed in writing. Proof of the execution of any such request, direction or other instrument, or of the writing appointing any such agent, if made in the following manner,

shall be sufficient for any purpose of this indenture, and shall be conclusive in favor of the Trustee with regard to due action by them or either of them taken under such request:-

The fact and date of the execution by any person of any such writing may be proved by the certificate of any officer in any jurisdiction, who by the laws thereof, has power to take acknowledgments of deeds to be recorded in such jurisdiction, that the person signing such writing acknowledged before him the execution thereof; or by an affidavit of a witness to such execution.

The fact of the holding of bonds hereunder by any bondholder, and the amount and number of any such bonds and the date of his holding the same, may be proved by a certificate executed by any trust company, bank, bankers or other depository (wherever situated), if such certificate shall be deemed by the Trustee to be satisfactory, showing that at the date therein mentioned such person had on deposit with such trust company, bank, banker or other depository the bonds described in such certificate. The ownership of bonds registered as to principal shall be proved by the register of bonds.

Section 2. The Company and Trustee may deem and treat the bearer of any bond hereby secured which shall not at that time be registered as to principal, as hereinbefore authorized, or which shall be registered to bearer, and the bearer of any coupon for interest on any such bond, whether such bond be registered as to principal or not, as the absolute owner of such bond or coupon, as the case may be, for the purpose of receiving payment thereof and for all other purposes; and neither the Company nor the Trustee shall be affected by any notice to the contrary.

The Company and the Trustee may deem and treat the person in whose name any bond hereby secured shall be so registered as to principal as the absolute owner thereof for the purpose of receiving payment of or on account of the principal thereof, and for all other purposes except to receive payment of interest represented by outstanding coupons; and all such payments so made to any registered holder for the time being or upon his order shall be valid and effectual to satisfy and discharge the liability upon any such bond to the extent of the sum or sums so paid.

ARTICLE VII.

LIABILITY OF OFFICERS, STOCKHOLDERS AND DIRECTORS.

No holder of any bond or coupon issued hereunder and secured hereby shall in any event have any right of recourse to or recovery from any past, present or future stockholder, officer or director of the Company for the principal or interest of the sums secured hereby, or any part thereof, whether under any liability now or hereafter existing or arising under any statute in any manner whatever, it being hereby distinctly understood and agreed that the several holders of the bonds from time to time waive all such rights of recourse or recovery by receiving and accepting said bonds.

ARTICLE VIII.

CONCERNING THE TRUSTEE.

Section 1. The Trustee accepts the trusts of this indenture and agrees to execute them upon the following terms and conditions to which the parties and the holders of the bonds hereby secured agree:

- (1) The Trustee shall be under no obligation to see to the record, registry or filing of this indenture.

(2) The recitals of fact contained in this mortgage or deed of trust and in the bonds thereby secured shall be taken as statements by the Company and shall not be construed as made by the Trustee.

(3) The Trustee shall be protected in acting upon any notice, request, consent, certificate, bond or other paper or document believed by it to be genuine and to have been signed by the proper party and by the proper authority.

(4) The Trustee shall be entitled to reasonable compensation for all services rendered by it and may employ suitable agents and attorneys, and the Company shall pay such compensation as well as all disbursements and expenses incidentally incurred and actually disbursed hereunder, and all payments by it made under the authority of this indenture, and until paid the said Trustee shall have a lien for the same upon the mortgaged property paramount to the lien of the bonds. The Trustee shall also be reimbursed and indemnified by the Company against any liability or damage which it may sustain or incur in the premises and for the same shall have a lien upon the trust estate paramount to the lien of the bonds.

(5) The Trustee shall not be responsible for any neglect, omission or other wrong doing of any agents or attorneys selected by it with reasonable care, nor shall it be otherwise answerable, save for its own willful misconduct.

(6) The Trustee shall not be under any obligation to take any action toward the execution or enforcement of the trusts hereby created which, in its opinion, will be likely to involve it in expense or liability unless one or more of the bondholders shall, as often as required by the Trustee, furnish it reasonable security and indemnity against such expense or liability; nor shall the Trustee be required to take any action in

respect of any default hereunder involving expense or liability unless requested by an instrument in writing, signed by the holders of not less than one-third in amount of the bonds then outstanding, and unless tendered reasonable security and indemnity as aforesaid, anything herein contained to the contrary notwithstanding. But neither any such notice or request nor this provision therefor shall affect any discretion herein given to the Trustee to determine whether or not it shall take action in respect to such default or to take action without such request.

(7) The Trustee shall not be responsible for the execution or validity hereof or of the bonds executed or to be executed hereunder and secured hereby, nor for the sufficiency of the security provided herein.

(8) The Trustee may advise with legal counsel and any action under this indenture taken or suffered in good faith by the Trustee in accordance with the opinion of counsel shall constitute full protection to the Trustee.

(9) The Trustee shall not be chargeable with notice of any default under this mortgage or deed of trust except upon delivery to it of a distinct specification in writing of such default by some person or persons interested in the trust whose interest if required must be proved to the reasonable satisfaction of the Trustee.

(10) The Trustee shall not be bound to recognize any person as a bondholder unless or until his bonds are submitted to the Trustee for inspection, if required, and his title satisfactorily established if in dispute.

(11) Whenever request or demand shall be made upon the Trustee by bondholders to perform any act of any character under this mortgage, or to proceed with any remedy prescribed by this mortgage in case of any

default or otherwise, and such request or demand shall specify the action or proceeding to be taken, it shall be discretionary with the Trustee, except as set forth in Section 4 and Section 5 of Article V hereof, to do the thing, take the action, enforce the remedy requested, or specified, or to perform any other action or institute any other suits or proceedings, or enforce any other remedy which may be appropriate under the then existing circumstances.

Section 2. The Trustee may resign and be discharged from the trusts created by this indenture by giving to the Company notice in writing of such resignation, specifying a date when such resignation shall take effect, which notice shall be published at least once, on a day not less than twenty days nor more than thirty days prior to the date so specified, in a daily newspaper of general circulation at the time published in the City of Newark, New Jersey, and the Borough of Manhattan, City and State of New York respectively. Such resignation shall take effect upon the day specified in such notice unless previously a successor Trustee shall be appointed as hereinafter provided, in which event such resignation shall take effect immediately upon the appointment of such successor Trustee.

The Trustee, or any successor Trustee, may be removed at any time by an instrument in writing under the hands of the holders of two-thirds in amount of the bonds at the time outstanding, or their attorneys thereunto fully authorized.

Section 3. In case at any time the Trustee or any successor Trustee shall resign or shall be removed or otherwise shall become incapable of acting, or in case a vacancy shall arise from any cause in the Trusteeship under this indenture, a successor or successors may be

appointed by the holders of a majority in amount of the bonds then outstanding by an instrument or concurrent instruments signed by such bondholders or their attorneys in fact duly authorized; but until a new Trustee shall be appointed by the bondholders as herein authorized the Company, by an instrument executed by order of its Board of Directors, may appoint a Trustee to fill such vacancy. Any Trustee appointed under any of the provisions of this Article shall be a Trust Company, if there be such willing and able to accept the trust. The Company shall publish notice of such appointment once in each week for two successive calendar weeks in a newspaper of general circulation published in the City of Newark, New Jersey, and the Borough of Manhattan, City and State of New York respectively. Any now Trustee so appointed by the Company shall immediately, and without further act, be substituted by a new Trustee or Trustees appointed in the manner above provided by a majority of the bondholders if such appointment by such bondholders be made prior to the expiration of twelve months after the completion of such publication of notice.

Any successor Trustee appointed hereunder shall execute, acknowledge and deliver to the Company an instrument accepting such appointment hereunder and thereupon such successor Trustee, without any further act, deed or conveyance, shall become vested with all estates, properties, rights, powers, trusts, duties and obligations of its predecessor in the trust hereunder, with like effect as if originally named as Trustee herein; but nevertheless on the written request of the successor Trustee or of the Company, the Trustee ceasing to act shall execute and deliver an instrument transferring to such successor Trustee upon the trusts herein expressed all the estates, properties, rights, powers and trusts of the Trustee so ceasing to act upon payment of its reasonable charges, expenses and disbursements;

and upon request of any such successor Trustee the Company shall make, execute, acknowledge and deliver any and all deeds, conveyances or other instruments in writing for more fully and certainly vesting in and confirming to such successor Trustee all such estates, properties, rights, powers, trusts and duties. All the conveyances and instruments herein provided for shall be at the cost of the Company.

ARTICLE IX

MISCELLANEOUS PROVISIONS.

Section 1. All the covenants, conveyances, stipulations, promises, undertakings and agreements herein contained by or on behalf of the Company shall bind or inure to the benefit of its successors and assigns, whether so expressed or not.

Section 2. Nothing in this indenture expressed or implied is intended or shall be construed to confer upon or to give to any person or corporation other than the parties hereto and the holders of the bonds issued hereunder any right, remedy or claim under or by reason of this indenture, or of any covenant, condition or stipulation hereof; and all covenants, stipulations, promises and agreements in this indenture contained, by or on behalf of the Company, shall be for the sole and exclusive benefit of the parties hereto and of the holders of the bonds issued hereunder.

IN WITNESS WHEREOF, EDISON STORAGE BATTERY COMPANY has caused these presents to be quadruplicate to be signed by its President and its corporate seal to be hereunto affixed, duly attested by its Secretary, and in testimony of its acceptance of the trusts hereby created, FIDELITY

TRUST COMPANY, of Newark, New Jersey, has caused these presents to be signed by its President or a Vice-President and its corporate seal to be hereunto affixed, duly attested by its Secretary or an Assistant Secretary, the day and year first above written

EDISON STORAGE BATTERY COMPANY.

By _____

President.

Attest:

Secretary.

FIDELITY TRUST COMPANY.

By _____

President.

Attest:

Secretary.

STATE OF NEW JERSEY)
COUNTY OF MIDDLESEX) ss.:

HE IS REMEMBERED that on this _____ day of _____
 , in the year of our Lord One Thousand Nine Hundred and
 Sixteen, before me, a Notary Public of the State of New Jersey, personally
 appeared THOMAS A. EDISON, who, I am satisfied, is President of Edison
 Storage Battery Company, the corporation named in the foregoing indenture
 of mortgage, and I having first made known to him the contents thereof, he
 acknowledged that he signed the same as such officer, and that the same was
 made by said corporation, sealed with its corporate seal, and delivered as
 its voluntary act and deed, all by virtue of authority from its Board of
 Directors. All of which is hereby certified.

STATE OF NEW JERSEY)
COUNTY OF ROSEN) ss.:

BE IT REMEMBERED that on this _____ day of _____, in the year of our Lord One Thousand Nine Hundred and Sixteen, before me, _____ personally appeared _____ who, I am satisfied, is _____ of Fidelity Trust Company, the corporation named in the foregoing indenture of mortgage, and I having first made known to him the contents thereof, he acknowledged that he signed the same as such officer, and that the same was made by said corporation, sealed with its corporate seal, and delivered as its voluntary act and deed; all by virtue of authority from its Board of Directors. All of which is hereby certified.

STATE OF NEW JERSEY)
 : SS.:
COUNTY OF ESSEX)

, of full age, being duly sworn

according to law, on his oath says that he is
of FIDELITY TRUST COMPANY, the mortgagee in the foregoing mortgage named
and is duly authorized agent in its behalf; that the true consideration
of said mortgage is the issue of temporary bonds aggregating in par value
the sum of Two Million Dollars, which said bonds have been issued by
Edison Storage Battery Company, a corporation organized under the laws of
the State of New Jersey, for the purposes set forth in said mortgage, and
have been certified by Fidelity Trust Company pursuant to the requirements
of the said mortgage for the purposes therein set forth, said temporary
bonds being exchangeable for definitive bond or bonds of equal face value
when said definitive bonds are ready for delivery as in said mortgage
provided for; and that the amount due and to grow due on said mortgage
is the sum of Two Million Dollars with interest which may have accrued
according to the terms of said mortgage and which may not have been paid.

Sworn to and subscribed before me

this day of 1916.

Edison Storage Battery Co.

THOMAS A. EDISON
PRESIDENT
R. B. HANSEY
VICE PRESIDENT
ROBERT A. EDISON
VICE PRESIDENT
H. S. THOMPSON
VICE PRESIDENT
H. F. HILLER
TREASURER
ARTHUR MIDD
SECRETARY

THOMAS A. EDISON

ORANGE, N. J. U.S.A.

CHARLES EDISON
MANAGER
OFFICE BUILDING

CABLE ADDRESS
"EDISON" NEW YORK

IN REPLYING
ADDRESS THE COMPANY
AND REFER TO

November 19, 1917.

Mr. Thomas A. Edison,
Llewellyn Park,
West Orange, N. J.

Dear Sir:

Pursuant to resolution adopted at a meeting of the Board of Directors of Edison Storage Battery Company, held this day, notice is given that a special meeting of the stockholders of said Company is hereby called to be held at the principal office of the Company, corner of Valley Road and Lakeside Avenue, West Orange, New Jersey, on Thursday, November 22, 1917, at ten o'clock a.m.

The objects of the meeting are to act upon certain resolutions adopted by the Board of Directors of the Company at a meeting held this day, recommending that the capital stock of the Company be increased from \$8,500,000 to \$9,000,000, divided into \$2,000,000 of preferred stock and \$7,000,000 of common stock by changing 5,000 shares of the common stock not yet issued into an equal number of shares of preferred stock of the par value of \$100 each, and by creating 15,000 additional shares of such preferred stock, and that to this end the certificate of incorporation be heretofore amended be further amended to empower the directors of the Company to issue said preferred stock up to the amount of \$8,000,000, if and when authorized; to ratify the acceptance by the Board of Directors of the offer of the holders of the Company's first mortgage five percent gold bonds now outstanding to sell such bonds to the Company at par plus accrued interest; and to transact such other business as may properly come before the meeting.

A certified copy of the resolutions adopted by the Board of Directors at its meeting held today is enclosed herewith.

Arthur Midd
Secretary.

[ENCLOSURE]

I, ARTHUR KUDD, Secretary of Edison Storage Battery Company do hereby certify that the following is a full, true and correct copy of certain resolutions adopted at a meeting of the Board of Directors of Edison Storage Battery Company, held Monday, November 19, 1917, at 10:00 o'clock A. M. at the principal office of the Company, corner Valley Road and Lakeside Avenue, West Orange, New Jersey.

WHEREAS, Article "Fourth" of the Certificate of Incorporation of the Company filed in the office of the Secretary of State on or about the 27th day of May, 1901, reads as follows:-

"FOURTH: The total authorized capital stock of this corporation is One Million Dollars divided into ten thousand shares of the par value of One Hundred Dollars each."

and

WHEREAS, the capital stock of the Company was thereafter increased from \$1,000,000 to \$3,500,000, said additional stock being like in all respects the stock of the Company authorized in said certificate of incorporation filed on or about the 27th day of May, 1901, a certificate of such increase of capital stock having been filed in the office of the Secretary of State on or about the 7th day of October, 1910; and

WHEREAS, in excess of five thousand shares of said common stock have not yet been issued;

NOW, THEREFORE, BE IT RESOLVED that it is advisable that the capital stock of the Company be increased from \$3,500,000 to \$5,000,000 divided into \$2,000,000 of preferred stock and \$3,000,000 of common stock by changing five thousand shares of the common stock not yet issued into an equal number of shares of preferred stock of the par value of \$100 each and by creating fifteen thousand additional shares of such preferred stock, and that to this end it is advisable to amend further the said certificate of incorporation filed on or about May 27th, 1901 so that said Article "Fourth" as heretofore amended by said certificate filed on or about the 7th day of October, 1910 shall read as follows:-

FOURTH: The total authorized capital stock of the corporation is Five Million Dollars (\$5,000,000) divided into fifty thousand (50,000) shares of the par value of One Hundred Dollars (\$100) each. Of such total authorized capital stock, twenty thousand (20,000) shares amounting to Two Million Dollars (\$2,000,000) shall be preferred stock, and thirty thousand (30,000) shares amounting to Three Million Dollars (\$3,000,000) shall be common stock.

The holders of the preferred stock shall be entitled to receive when and as declared from the surplus or net profits of the corporation dividends at the rate of five percent per annum yearly, half-yearly or

[ENCLOSURE]

-2-

quarterly as the Board of Directors may from time to time fix and determine. The dividends on the preferred stock shall be cumulative from the date of original issuance thereof. No dividends shall be paid on or set apart for any common stock at any time unless and until the holders of the preferred stock shall have received full dividends thereon at the rate of five percent per annum for all previous dividend periods or payment thereof provided for by funds set apart for such purpose.

After full cumulative dividends at the rate of five percent per annum on the preferred stock for all previous dividend periods shall have been declared and paid or payment provided for by funds set apart for the purpose, the holders of the common stock shall be entitled to receive when and as declared out of the remaining surplus or net profits, dividends at the rate of five percent per annum payable yearly, half-yearly or quarterly as the Board of Directors may from time to time fix and determine.

After full dividends as aforesaid on the common stock for all previous dividend periods from and after November 30, 1917, or from and after the date of original issuance thereof in the case of common stock issued subsequent to November 30, 1917, and on the preferred stock from the date of the original issuance thereof, shall have been declared and paid or payment provided for by funds set apart for that purpose, the remainder of any surplus or net profits shall be applicable to the payment of further dividends equally per share upon both preferred and common stocks, which said further dividends shall not be at a rate in excess of three percent per annum on the preferred stock calculated cumulatively from the date of the original issuance thereof.

After dividends as hereinbefore provided for on the preferred and common stock shall have been declared and paid or payment provided for by funds set apart for the purpose to an amount not to exceed the rate of eight percent per annum, as aforesaid, the remainder or any surplus or net profits shall then be applicable to the payment of further dividends upon the common stock.

In determining the distribution of dividends between the preferred and common stock, there shall be excluded from calculation all dividends paid or payable upon the common stock in excess of the aggregate dividends at the rate of eight percent per annum to which said stock may be entitled as hereinbefore provided.

The preferred stock shall be subject to redemption, in whole or in part, at the option of the Corporation (to be determined by the Board of Directors, out of any surplus or net profits, at any time after three years from the original issuance thereof at one hundred and five percent (105%) of the par value thereof, together with all dividends declared thereon and remaining unpaid, provided, however, that no such preferred stock shall be so redeemed until all cumulative dividends at the rate of five percent per annum up to the date of such redemption on all outstanding preferred stock shall have been paid or funds set apart for this purpose.

In case the Board of Directors of the corporation shall determine to redeem the whole of the preferred stock, they shall cause to be mailed to each holder of the preferred stock at his address registered upon the books of the corporation, at least thirty days before the date of such proposed redemption, a notice stating the price and place at which and the time when

[ENCLOSURE]

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the redemption in such notice, the corporation shall, upon presentation, duly endorsed for transfer and surrender, of the certificate of said preferred stock, pay to the holder thereof the price fixed herein as the price of redemption, and the right to dividends upon any preferred stock shall cease on the date fixed by such notice for redemption.

In case the Board of Directors of the corporation shall determine to redeem a part of the preferred stock, in every such case the shares of such preferred stock represented by each certificate therefor as such certificates shall be outstanding at the beginning of business on the day fixed by the directors for such redemption, shall be redeemed proportionately. Notice of such partial redemption, stating the proportion to be redeemed, the price and place at which, and the time when such preferred stock is to be redeemed, shall be mailed to each holder of the preferred stock at his address registered upon the books of the corporation, at least thirty days before the date of such proposed partial redemption. On and after the date fixed in the notice for such partial redemption, the corporation, upon presentation duly endorsed for transfer and surrender, or presentation for stamping (as the corporation may require) of any certificate for such preferred stock, shall pay to the holder thereof for each share redeemed the price fixed herein as the price of redemption, and the right of any holder of such preferred stock to dividends upon the shares represented by any certificate shall cease, in the proportion fixed in the notice as the proportion to be redeemed, on the day fixed for such redemption. In every case of such partial redemption, each certificate for the stock so redeemed shall be surrendered, and a new certificate issued for the number of shares represented by such certificate and remaining unredeemed, or the old certificate may be properly stamped and returned to the holder. In case of the surrender of the certificates, the corporation may issue scrip representing fractional portions of the unredeemed shares. Said scrip shall not entitle the holder thereof to receive dividends thereon while the same is outstanding; but such scrip may at any time be exchanged for certificates of stock when presented in amounts representing an even share or shares of stock, and upon such exchange, the holder of such scrip upon surrendering the same shall be entitled to be paid any dividends theretofore declared and remaining unpaid upon the stock represented thereby.

No preferred stock represented by a certificate bearing date prior to the date fixed for the redemption of the whole or a part of the preferred stock shall, after the date so fixed for such redemption, be transferred upon the books of the corporation unless and until such certificate shall have been surrendered or stamped by the corporation as the case may require.

In the event of the liquidation, dissolution or winding up (whether voluntary or involuntary) of the corporation, the assets and funds of the corporation, after payment of the corporation's indebtedness, shall be applied in the order mentioned as follows:-

First, to the payment to the holders of the preferred stock of the full amount of the par value of their preferred shares together with the amount of any deficit in dividends thereon calculated at the rate of five percent per annum from the date of original issuance thereof; then to the payment to the holders of the common stock of the full amount of the par value of their common shares together with the amount of any deficit in dividends thereon calculated at the rate of five percent per annum from and after November 30, 1917, or from and after the date of original issuance

[ENCLOSURE]

-4-

thereof in the case of common stock issued subsequent to November 30, 1917; and lastly, the remaining assets and funds shall be distributed among and paid to the holders of the preferred and common stock pro rata share and share alike, and without preference or priority of one class of shares over the other.

Each stockholder shall be entitled to one vote for each share of stock held by him, whether preferred or common stock.

AND BE IT FURTHER RESOLVED that a meeting of the stockholders to take action upon the foregoing resolution be called forthwith to be held at the principal office of the Company at the corner of Valley Road and Lakeside Avenue, West Orange, New Jersey, on Thursday, November 22nd, 1917, at ten o'clock A. M.

RESOLVED that the offer of the holders of the Company's First Mortgage five percent Gold Bonds now outstanding to sell their bonds to the Company at par plus accrued interest be and the same is hereby accepted, subject to ratification by the stockholders.

IN WITNESS WHEREOF, I have hereunto signed my name as Secretary and affixed the seal of the Company, this nineteenth day of November, Nineteen Hundred Seventeen.

Arthur Mudd
Secretary

1
This agreement entered into
this day of —
1914 by & between the
S. E. Co. & the Storage
Battery Co of Orange
#1 Whereas, the S. B. Co is
desirous of extending
continuously to obtain
its supply of Lithium
hydroxide from the
S. E. Co for a further
period of 5 years, &
#2 Whereas, the Standard
Co is possessed of a
Lithium mineral mine

2
affording it a supply
of ore, and ^{also} of a factory
capable of producing
about 16000 to 18000
lbs of Dry Lithium
hydroxide per month
all of which is bought
by the Battery Co, and
#3 Whereas, in the course
of business, the requirements
of the Battery Co may
at any time increase
up to a ^{quantity} of
40,000 lbs monthly, and
#4 Whereas the S. Co
is unwilling to erect
additional Chemical

3

works to increase its
 capacity to this quantity
 amount which in
 certain contingencies
 might not be taken
 by the Storage BCs
 It is ^{therefore} ~~advised~~ ^{agreed} that the
 Ballant Co will
 as an ~~understanding~~
 to the pay for the
 extra chemical
 above this necessary
 to ~~increase~~ ^{interest the capacity} 40,000
 lbs monthly to the
 extent of \$110,000,
 which is the estimated

Cost, ^{thereof,} ¹ as per schedule
 appended made by
 the ~~Standard Co~~ ^{which is attached} and
 4 It should not cost more
 than the estimate
 the St Co itself shall
 pay for the ~~extra~~ ^{in any case}
 the ~~Storage~~ ^{the St Co shall pay the balance} ~~BCs~~ ^{by 513 Co} ~~shall be~~ ^{for such chemical applications} ~~accounted~~
 to \$110,000 & this
 sum is to be paid in
 monthly installments
 covering a period of
 12 months
 after which the
 expiration of the 5 yr
 period the property paid
 for by the BCs shall

* said element
 affirmative

5
become the property
of the ~~State~~ Standard
Co -

~~The contract shall~~
~~be as follows:~~

The price which the
E Co shall pay to
the S Co shall be ^{the cost}
price of ^{dry lithium hydroxide}
sixty five cents per pound
with impurities
not exceeding $\frac{1}{2}\%$ of
which the following
are limits ^{this is to be added to the cost price}
So the cost price that
S Co may add 25
cents per lb to its profit x

6
The aforesaid base price is based on
~~which~~ the present
conditions as to labor costs
& supplies -

If at any time during
the Contract period
the cost of labor in its
mines or factory increases
or ~~decreases~~ so as to
cause a increase or
~~decrease~~ in cost of
the lithium hydroxide, ~~the S Co~~
A public accountants
^{independently selected}
shall determine from the
S Co books such increase
or decrease of cost,
& this increased cost
shall be added to the

base price of
65 cents —
the standard
adding its 25 c per
lb. freight,

Should the Edison Co
fail to pay for its
monthly requirements
within 60 days after
they are due the ^{outstanding} payments
of \$110,000 ~~shall~~ ^{be} ~~advanced~~ ^{paid} or less
shall all be payable
at once —

8

It is understood &
agreed that while
the ^{present} requirements ~~of~~
of the B. & O.
amount 18,000 to 20,000 lbs
& may ~~be~~ reach 40,000
if the exigencies of business
require it necessary the
SB may increase its
requirements to any quantity
not less than
18,000 to 20,000 lbs
monthly, but the payments
on the ^{amount of} \$110,000 shall
continue until paid

Lithia
Standard

MEMORANDUM OF AGREEMENT made this day of November, 1918, by and between EDISON STORAGE BATTERY COMPANY, a New Jersey corporation of West Orange, New Jersey, hereinafter called the Edison Company, party of the first part, and STANDARD ESSENCE COMPANY, a New Jersey corporation, of Maywood, New Jersey, hereinafter called the Standard Company, party of the second part, WITNESSETH:

WHEREAS, the Edison Company is desirous of continuing to obtain its supply of Lithium Hydroxide from the Standard Company for a further period of five years, and,

WHEREAS, the Standard Company is possessed of a Lithium mineral mine affording it a supply of ore, and also of a factory capable of producing about 16,000 to 18,000 pounds of dry Lithium Hydroxide per month, all of which is bought by the Edison Company, and

WHEREAS, in the course of business, the requirements of the Edison Company for Lithium Hydroxide may increase up to a quantity of 40,000 pounds monthly, and

WHEREAS, the Standard Company is unwilling to erect additional Chemical Works to increase its capacity to this quantity, which in certain contingencies might not be taken by the Edison Company,

IT IS THEREFORE AGREED, that the Edison Company will pay for the extra chemical apparatus necessary to increase the capacity to 40,000 pounds, monthly, to the extent of \$110,000, which is the estimated cost thereof, as per schedule made by the Standard Company and hereto attached.

Should said chemical apparatus cost more than the estimated cost, the Standard Company itself shall pay for the excess. In any event, the money payment by the Edison

Company for said chemical apparatus shall be limited to \$110,000, and this sum is to be paid in monthly installments covering a period of months. After the expiration of the five year period, the property paid for by the Edison Company shall become the property of the Standard Company.

The price which the Edison Company shall pay to the Standard Company shall be the cost price of sixty-five cents per pound of dry Lithium Hydroxide %, with impurities not exceeding %, of which the following are limits. This is to be called the base price.

To the cost, or base price, the Standard Company may add 25¢ per pound as its profit. The aforesaid base price is based on the present conditions as to labor, costs and supplies.

If at any time during the contract period the cost of labor in its mines or factory increase so as to cause an increase in cost of the Lithium Hydroxide, a Public Accountant, mutually agreed upon, shall determine from the Standard Company's books such increase of cost, and this increased cost shall be added to the base price of sixty-five cents, the Standard Company adding its 25¢ per pound thereto.

Should the Edison Company fail to pay for its monthly requirements within 60 days after they are due, the remaining payment due on said sum of \$110,000, or less, shall all be payable at once.

It is understood and agreed that while the present requirements of the Edison Company are about 18,000 to 20,000 pounds per month, and may reach 40,000 pounds, if the exigencies of business render it necessary the Standard Company

may reduce its requirements to any quantity less than 18,000
to 20,000 pounds monthly, but the payments on account of the
\$110,000 shall continue until paid.

BATTERY-STORAGE

Edison Storage Battery Co.

CHARLES EDISON
CHAIRMAN
OF THE BOARD

THOMAS A. EDISON
Thomas A. Edison

ORANGE, N.J. U.S.A.

June 11, 1919.

OFFICE OF
VICE-PRESIDENT AND FINANCIAL EXECUTIVE

THOMAS A. EDISON PRESIDENT
E. W. HANSEN VICE-PRESIDENT
ROBERT A. EDISON SECRETARY
W. D. THOMPSON TREASURER
W. F. MILLER VICE-PRESIDENT
ARTHUR RUDD SECRETARY

Reference:
IT-1:CR-2
RJC 11 756 559

Commissioner of Internal Revenue,
Treasury Department,
Washington, D. C.

Dear Sir: Attention of Mr. P. S. Talbert, Acting Deputy Commr.

From the enclosed exhibits you will see that we have taken the time to reply rather fully to your letter of April 22, in order to give you all the information you desire.

As requested, the following statements are enclosed, the same being in further support of the Income and Excess Profits Tax Returns of Edison Storage Battery Company and The Edison Storage Battery Supply Company, for the fiscal year ended February 28, 1917 (not 1916).

- Exhibit 1: Consolidated Balance Sheets as at February 29, 1916 and February 28, 1917.
- 2: Consolidated Profit and Loss Statement for Fiscal Year ended February 28, 1917.
- 3: Analysis of Patent Account for past 19 years.
- 4: Letter signed by MR. THOS. A. EDISON, dated May 19, 1919, addressed to Mr. Talbert. Mr. Edison, the inventor of the Edison Storage Battery, and the world's foremost scientist, explains for your benefit the basis used in valuing the Company's patents.

After examining Exhibits 3 and 4 you may feel that our books show a rather low valuation of our patents. This, while undoubtedly being the case, is in harmony with our policy of always stating the facts of the business as conservatively as possible.

Commissioner of Internal Revenue:

-2-

June 11, 1919.

You will note from Mr. Edison's letter that the Company was in a more or less experimental stage up to 1910. As a matter of fact, the books were not balanced until February 28, 1910. Therefore, we are not enclosing yearly balance sheets and profit and loss accounts, beginning with the date of organization, as you requested, the other exhibits attached probably giving you all the information you desire.

ADJUSTMENT OF INVESTED CAPITAL:

Item 5, Schedule B, \$16,820.56, is the difference between the actual bad debts written off and the amount of reserve set up to take care of bad debts, and hence is an item disallowed as a deduction from Income. Consequently it was added to Invested Capital, Feb. 28, 1917.

Item 6, Schedule B, \$45,911.85, represents the amount written off by us on account of our old obsolete factory property in Glen Ridge N. J. Being an item disallowed as a deduction from Income we were obliged to add it to our Invested Capital, Feb. 28, 1917.

BAD DEBTS WRITTEN OFF:

With respect to Item 5 A "Loss - Bad Debts" \$66,145.57. This amount was not written off until every effort had been made by our Credit Department to secure payment, which procedure was followed in each case. Some of the concerns went through bankruptcy proceedings.

INCOME AND PROFITS TAX RETURN FOR YEAR ENDING 2-28-18:

Your reference to Article 952 of Part II, Preliminary Regulations 45, is appreciated. On March 15, 1919, we filed Form 11031-2 with our Collector in Newark, N. J., and paid the estimated tax then due thereon, and on June 15, 1919, we shall file final return on Form 11120, thus fully complying with the Regulations to which you so kindly directed our attention. In this, as well as in all other tax matters, we are personally guided by the Collector of Internal Revenue at Newark, N. J., with whom our returns are discussed at length before filing.

If you require further information please address your letter to the writer.

Very truly yours,

RHA

Assistant Financial Executive.

EDISON STORAGE BATTERY COMPANY
Orange, New Jersey.

May 19, 1919.

EXHIBIT No. 1 A

Edison Storage Battery Co. and The Edison Storage Battery Supply Co.
Consolidated Balance Sheet as at Feb. 28, 1917.

	Total	Edm. of Inter-co. Items	Ed. Stor. Bat. Co.	Ed. Stor. Bat. Sup. Co.
ASSETS				
Real Estate	\$72,473.48		72,473.48	
Buildings	787,151.51		787,151.51	
Equipment	<u>2,041,288.43</u>		<u>2,035,820.46</u>	<u>5,417.97</u>
	2,901,563.42		2,896,145.45	5,417.97
Reserve for Depreciation	<u>585,145.90</u>		<u>585,477.54</u>	<u>671.36</u>
	2,315,414.52		2,310,667.91	4,746.61
Cash	245,261.01		227,088.81	18,172.20
Accounts Receivable	479,675.47		459,868.42	19,807.05
Notes Receivable	16,614.10		16,464.10	150.00
Due from Edison Industries	32,233.46	78,454.80	110,688.28	
Securities		900.00	900.00	
Inventories:				
Raw Mat'l & Supplies	\$50,655.48		350,655.48	
Work in Process	827,078.44		827,078.44	
Finished Stock	430,986.04		378,522.73	52,464.11
Deferred Assets	17,645.58		15,180.33	2,465.25
Other Assets (Patents)	<u>1,868,302.40</u>		<u>1,868,302.40</u>	
	\$6,585,867.30	79,354.80	6,565,416.88	97,805.22

EDISON STORAGE BATTERY COMPANY
Orange, New Jersey.

May 19, 1919.

EXHIBIT No. 1 B

Edison Storage Battery Co. and The Edison Storage Battery Supply Co.
Consolidated Balance Sheet as at Feb. 28, 1917.

<u>LIABILITIES</u>	<u>Total</u>	<u>Elim. of Inter-Co. Items</u>	<u>Ed. Stor. Bat. Co.</u>	<u>Ed. Stor. Bat. Sup. Co.</u>
Bonded Debt	2,000,000.00		2,000,000.00	
Accounts Payable	266,034.34		265,008.81	3,085.53
Notes Payable Bank Loans	510,000.00		510,000.00	
Due to Edison Industries		78,454.00		78,454.00
Deposits on Contracts	71,688.95		60,688.95	5,000.00
Deferred Liabilities	80,297.86		79,599.90	697.96
Reserve for Losses on Notes & Accts. Rec.	42,734.29		47,346.41	2,587.88
Reserve for Contingencies:	39,541.57		39,185.99	355.58
Capital Stock Common	2,998,300.00	900.00	2,998,200.00	1,000.00
Surplus	568,210.29		569,396.82	8,823.47
	<u>\$6,883,867.30</u>	<u>79,354.00</u>	<u>6,565,416.88</u>	<u>97,805.22</u>

EDISON STORAGE BATTERY COMPANY
Orange, New Jersey.

May 19, 1919.

EXHIBIT No. 1 C

Edison Storage Battery Co. and The Edison Storage Battery Supply Co.
Consolidated Balance Sheet as at Feb. 29, 1916.

<u>ASSETS</u>	<u>Total</u>	<u>Elim. of Inter-co. Items</u>	<u>Ed. Stor. Bat. Co.</u>	<u>Ed. Stor. Bat. Sup. Co.</u>
Real Estate	43,839.11		43,839.11	
Buildings	65,328.87		65,328.87	
Machinery & Equipment	<u>1,124,937.86</u>		<u>1,123,514.17</u>	<u>1,423.69</u>
Reserve for Depreciation	1,244,108.94		1,242,682.15	1,426.79
	<u>370,921.14</u>		<u>370,351.14</u>	
	873,184.70		872,761.01	1,423.69
Cash	61,084.41		77,036.37	4,048.04
Accounts Receivable	322,391.57		308,411.62	13,979.95
Notes Receivable	6,300.00		6,300.00	
Due from Edison Industries	624,879.14	82,425.49	707,004.63	
Securities	14,152.52	900.00	15,052.52	
Inventories:				
Raw Materials & Supplies	211,576.95		211,576.95	
Work in Process	512,366.27		512,366.27	
Finished Stock	310,666.51		274,793.98	35,872.53
Deferred Assets <i>Charges</i>	32,034.47		31,280.73	113.74
Other Assets (Patents)	2,025,894.75		2,025,894.75	
	<u>5,014,234.29</u>	<u>83,325.49</u>	<u>5,042,118.83</u>	<u>55,440.95</u>

EDISON STORAGE BATTERY COMPANY
ORANGE, NEW JERSEY.

May 19, 1919.

Exhibit No. 1 D

Edison Storage Battery Co. and The Edison Storage Battery Supply Co.
Consolidated Balance Sheet as at Feb. 29, 1916.

<u>LIABILITIES</u>	<u>Total</u>	<u>Elim. of Inter-co. items</u>	<u>Ed. Stor. Bat. Co.</u>	<u>Ed. Stor. Bat. Sup. Co.</u>
Bonded Debt	\$ 800,000.00		500,000.00	
Accounts Payable	156,137.04		156,137.04	
Notes Payable, Edison Industries]	47,000.00		47,000.00	
Due to Edison Industries	825,559.73	82,425.49	825,559.73	82,425.49
Deposits on Contracts	59,670.02		59,670.02	
Deferred Liabilities	56,789.58		56,789.58	
Reserve for Losses on Notes & Accts. Receivable	16,820.56		16,820.56	
Reserve for Contingencies	11,859.74		11,859.74	
Capital Stock Common	2,998,300.00	900.00	2,998,200.00	1,000.00
Surplus	342,997.62		370,082.16	27,984.54
	<u>\$5,014,234.29</u>	<u>83,325.49</u>	<u>5,042,118.83</u>	<u>55,440.95</u>

EXHIBIT No. 2

May 19, 1919.

Edison Storage Battery Co. and The Edison Storage Battery Supply Co.
Consolidated Profit & Loss Statement, Feb. 28, 1917.

	Ed. Stor. Bat. Sup. Co.	Ed. Stor. Bat. Co.	Total	
Gross Sales	95,535.17	3,599,978.66	3,695,513.83	
Cost of Goods Sold	<u>53,682.72</u> 41,852.45	<u>2,200,321.08</u> 1,399,657.58	<u>2,254,003.80</u> 1,441,510.03	
Rentals		72,517.69	72,517.69	
Interest		1,398.67	1,398.67	
From other Sources		<u>14.39</u>	<u>14.39</u>	
	41,852.45	1,473,388.33		1,515,240.78
Ordinary and necessary expenses	29,541.94	357,331.29	386,873.23	
Comp. of Officers		28,947.29	28,947.29	
Rep. to equipment		86,865.69	86,865.69	
Interest		81,695.55	81,695.55	
Taxes	389.57	11,639.39	12,028.96	
Rentals		150,650.19	150,650.19	
Bad debts written off	2,060.66	66,143.57	68,204.23	
Loss by fire		1,170.98	1,170.98	
Exhaustion	<u>.671.36</u> 82,653.53	<u>354,201.10</u> 1,148,645.05	<u>354,872.46</u>	1,181,306.58
As per Form #1031, Line #8	9,188.92	324,743.28		333,932.20

EXHIBIT No. 3

PATENTS

<u>Date</u>	<u>Explanation</u>	<u>Dr.</u> <u>to pat. acct</u>	<u>Cr.</u> <u>to gen. acct</u>	<u>Balance</u> <u>as per bal. sht</u>
Jul 17 '01	At this date Edison Storage Battery Co. purchased from Mr. Edison his invention and the patents of a storage battery of an entirely new type, upon which he had been experimenting for a great many years in an exhaustive manner and at very great expense, for			
Feb 28 '10	The patents taken out by Mr. Edison were assigned to Edison Storage Battery Co. in accordance with the agreement under which they purchased his invention, and it was found desirable to continue his experiments which resulted in important improvements which greatly increased the life and greatly improved the construction of the battery from mechanical and electrical standpoints. During this time it was also necessary to place the battery in the hands of the public in order to determine how it would stand up in actual practice, these commercial operations being carried on by Edison Storage Battery Co., and the net loss or expense thereof up to Feb. 28, 1910 was charged to Experimental (or patent) Account, as was necessary since the battery at that time was still in an experimental stage, and amounted to	\$1,000,000.00		
		\$1,678,974.26		2,678,974.26

EXHIBIT No. 3

PATENTS

<u>Date</u>	<u>Explanation</u>	Dr.	Cr.	Balance
		<u>to ret. acct</u>	<u>to dep. acct</u>	<u>as per bal. sht</u>
Mar '10 to	Forward	2,678,974.26		
Feb '16	Cash expenditures	4,104.59		
	Depreciation	<u>2,685,078.85</u>	<u>657,184.10</u>	2,025,894.75
			657,184.10	
Mar '16 to				
Feb '17	Cash expenditures	246.72		
	Depreciation	<u>2,685,325.57</u>	<u>157,839.07</u>	1,868,302.40
			815,025.17	

Edison Storage Battery Co.

THOMAS A. EDISON
Thomas Edison

ORANGE, N.J. U.S.A.

WILLIAM EDISON
 CHIEF OF THE BOARD
 OFFICE OF
 VICE-PRESIDENT AND FINANCIAL EXECUTIVE

THOMAS A. EDISON PRESIDENT
 S. B. HANBURY VICE-PRESIDENT
 ROBERT A. BATHMAN SECRETARY
 H. G. THOMPSON TREASURER
 H. F. MILLER SECRETARY
 ARTHUR HUDD SECRETARY

May 16, 1919.

Mr. T. Talbert,
 Acting Deputy Commissioner of Internal Revenue,
 Washington, D. C.

Dear Sir:

In 1901 the Edison Storage Battery Company purchased from me my invention and the patents of a storage battery of an entirely new type, upon which I had been experimenting for a great many years in an exhaustive manner and at very great expense, for \$1,000,000.00

This invention was of a basic and pioneer character, and the Edison Storage Battery Company has a complete monopoly in the manufacture of batteries in which an alkaline electrolyte is used in combination with electrodes employing compounds of iron and nickel respectively instead of an acid electrolyte as used in the well known forms of lead batteries.

The patents taken out were by me assigned to the Edison Storage Battery Company in accordance with the agreement under which they purchased my invention, and it was found desirable to continue my experiments which resulted in important improvements which greatly increased the life and greatly improved the construction of the battery from mechanical and electrical standpoints. During this time it was also necessary to place the battery in the hands of the public in order to determine how it would stand up in actual practice, these commercial operations being carried on by the Edison Storage Battery Company, and the net loss or expense thereof up to February 28, 1910 and amounting to \$1,678,974.26 was charged to their

Experimental (or Patent) Account, as was necessary since the battery at that time was still in an experimental stage.

The proof of the value of these patents to the Company is apparent when it is considered that the total sales from 1901 to the end of the fiscal year February 28, 1910 was but \$619,000. as compared with sales made during the fiscal year ended February 28, 1919 of six million dollars. In the last eight years the Edison Storage Battery Company has sold nearly twenty-two and three quarter million dollars worth of storage batteries.

The Company has today invested in land and buildings over eight hundred thousand dollars; in machinery, tools and equipment over one and a half million dollars; and in inventories of raw materials, work in process and finished stock over two and three quarter million dollars. Its accounts receivable are close to the million dollar mark.

The splendid growth of the business is attributable to the superior quality of its product, made possible by the experimental and research work performed during the early part of the Corporation's existence, and the patents which resulted therefrom.

Yours very truly,

(Signed) THOS. A. EDISON

President.

Preliminary Draft
Edison Storage Battery Co.



ORANGE, N.J., U.S.A.

June 28, 1923

IN REPLYING
ADDRESS THE COMPANY
AND REFER TO

ok 7/23

International Equipment Co.,
Transportation Bldg.,
Montreal, Quebec, Canada.

Gentlemen:

It is mutually agreed to supplement and amend our contract with you of November 9, 1922 with reference to the sales of Edison storage batteries in the Dominion of Canada and Newfoundland, as follows:

(1) To avoid any possible misunderstanding, it is to be understood that our agreement with you covers only cells of the types specifically mentioned in paragraph 14 of said agreement, and that it is not to cover sales of a new type of storage battery on which Mr. Edison is now working and which is especially designed or to be designed for starting internal combustion engines and which is referred to by Mr. Edison as the "Ford Starter Battery," which said new type of storage battery may or may not be manufactured and marketed by us.

allowance
(2) On all sales to you on orders placed after the date hereof for A, B, S and L type cells, we will allow you an additional discount of five (5%) per cent making the discount, on cells of said types as follows:

land allowance

A & B type cells.....	30% and 5%
C --- " "	25% and 5%
L --- " "	25% and 5%

(3) Paragraph 9 of the agreement of November 9, 1922 is hereby cancelled, and you agree to sell all batteries hereafter purchased from us with the understanding that no guaranty or replacement agreement made by us applies to them, except that we will replace free of charge any cell which when returned to us f.o.b. Orange, N.J. within one year from its date of shipment from our factory shall, upon our inspection, prove to

*To cover cost of maintenance and
you paying to autome,*

International Equipment Co. -2-

June 28, 1923

be defective in workmanship or material. You will further agree that no guaranty or replacement agreement on Edison cells which you may make or enter into upon your own responsibility and at your own risk and expense shall be more liberal than the terms of the standard guaranty or replacement agreement then being offered by us generally to purchasers in the United States.

(4) It is further agreed that said agreement of November 9, 1922 as hereby supplemented and amended shall be binding upon both parties for a period of four years from November 9, 1922 and thereafter until cancelled. It may after said four years' period be cancelled by either party upon 60 days' notice in writing to the other. This paragraph shall supersede paragraph 27 of said agreement of November 9, 1922.

(5) Except as herein supplemented and amended, said agreement of November 9, 1922 shall remain in full force and effect.

Very truly yours,

EDISON STORAGE BATTERY COMPANY

By _____
Chairman of the Board
of Directors.

Accepted and agreed to:

INTERNATIONAL EQUIPMENT COMPANY

By _____

State of New Jersey



Department of State

I, Thomas H. Martin, Secretary of State, of the State
of New Jersey, do hereby Certify that the foregoing is a true
copy of CERTIFICATE OF AMENDMENT of CERTIFICATE OF INCORPORATION
of EDISON STORAGE BATTERY COMPANY,

_____ and the endorsements thereon
as the same is taken from and compared with the original filed
in my office on the Third day of July A.D.
1924, and now remaining on file and of record therein.

In Testimony Whereof, I have hereunto
set my hand and affixed my Official
Seal at Trenton, this Third
day of July A.D. 1924.



Thomas H. Martin
Secretary of State.

CERTIFIED COPY

OF

Certificate of Amendment of

Certificate of Incorporation

of

EDISON STORAGE BATTERY COMPANY.

1924-07-02

CERTIFICATE OF AMENDMENT OF CERTIFICATE OF INCORPORATION
OF EDISON STORAGE BATTERY COMPANY.

The location of the principal office in this State is at the corner of Valley Road and Lakeside Avenue in the Town of West Orange, County of Essex and State of New Jersey.

The name of the agent therein and in charge thereof upon whom process against this corporation may be served is Harry F. Miller.

RESOLUTION OF BOARD OF DIRECTORS

"The Board of Directors of Edison Storage Battery Company, a corporation of New Jersey, on this 26th day of June, 1924, do hereby resolve and declare that it is advisable that Article Fourth of the Certificate of Incorporation of this Company as heretofore amended be further amended to read as follows:-

"FOURTH: The total authorized capital stock of the corporation is Five Million Dollars (\$5,000,000) divided into fifty thousand (50,000) shares of the par value of One Hundred Dollars (\$100) each. Of such total authorized capital stock, twenty thousand (20,000) shares amounting to Two Million Dollars (\$2,000,000) shall be preferred stock, and thirty thousand (30,000) shares amounting to Three Million Dollars (\$3,000,000) shall be common stock.

"The holders of the preferred stock shall be entitled to receive when and as declared from the surplus or net profits of the corporation dividends at the rate of five percent per annum yearly, half-yearly or quarterly, as the Board of Directors may from time to time fix and determine. The dividends on the preferred stock shall be cumulative from the date of original issuance thereof. No dividends shall be paid on or set apart for any common stock at any time unless and until the holders of the preferred stock shall have received full dividends thereon at the rate of five percent per annum for all previous dividend periods or payment thereof provided for by funds set apart for such purpose.

"After full cumulative dividends at the rate of five percent per annum on the preferred stock for all previous dividend periods shall have been declared and paid or payment provided for by funds set apart for the purpose, the holders of the common stock shall be entitled to receive when and as declared out of the remaining surplus or net profits, dividends at the rate of five percent per annum payable yearly, half-yearly or quarterly as the Board of Directors may from time to time fix and determine.

"After full dividends as aforesaid on the common stock for all previous dividend periods from and after November 30, 1917, or from and after the date of original issuance thereof in the case of common stock issued subsequent to November 30, 1917, and on the preferred stock from the date of the original issuance thereof, shall have been declared and paid or payment provided for by funds set apart for that purpose, the remainder of any surplus or net profits shall be applicable to the payment of further dividends equally per share upon both preferred and common stock, which said further dividends shall not be at a rate in excess of three percent per annum on the preferred stock calculated cumulatively from the date of the original issuance thereof. After dividends as hereinbefore provided for on the preferred and common stock shall have been declared and paid

OF THE BOARD OF DIRECTORS

CONTAINING THE CHARTER AND BY-LAWS OF THE CORPORATION

-2-

or payment provided for by funds set apart for the purpose to an amount not to exceed the rate of eight percent per annum, and as aforesaid, the remainder of any surplus or net profits shall then be applicable to the payment of further dividends upon the common stock.

"In determining the distribution of dividends between the preferred and common stock, there shall be excluded from calculation all dividends paid or payable upon the common stock in excess of the aggregate dividends at the rate of eight percent per annum to which said stock may be entitled as hereinbefore provided.

"The preferred stock shall be subject to redemption, in whole or in part, at the option of the corporation (to be determined by the Board of Directors), at any time after three years from the original issuance thereof at one hundred and five percent (105%) of the par value thereof, together with all dividends declared thereon and remaining unpaid, provided, however, that no such preferred stock shall be so redeemed until full cumulative dividends at the rate of five percent per annum up to the date of such redemption on all outstanding preferred stock shall have been paid or funds set apart for this purpose.

"In case the Board of Directors of the corporation shall determine to redeem the whole of the preferred stock, they shall cause to be mailed to each holder of the preferred stock at his address registered upon the books of the corporation, at least five days before the date of such proposed redemption, a notice stating the price and place at which and the time when said preferred stock is to be redeemed. On and after the date fixed for the redemption in such notice, the corporation shall, upon presentation, duly endorsed for transfer and surrender, of the certificate of said preferred stock, pay to the holder thereof the price fixed herein as the price of redemption, and the right to dividends upon any preferred stock shall cease on the date fixed by such notice for redemption.

"In case the Board of Directors of the corporation shall determine to redeem a part of the preferred stock, in every such case the shares of such preferred stock represented by each certificate thereon as such certificates shall be outstanding at the beginning of business on the day fixed by the directors for such redemption, shall be redeemed proportionately. Notice of such partial redemption, stating the proportion to be redeemed, the price and place at which, and the time when such preferred stock is to be redeemed, shall be mailed to each holder of the preferred stock at his address registered upon the books of the corporation, at least five days before the date of such proposed partial redemption. On and after the date fixed in the notice for such partial redemption, the corporation, upon presentation duly endorsed for transfer and surrender, or presentation for stamping (as the corporation may require) of any certificate for such preferred stock, shall pay to the holder thereof for each share redeemed the price fixed herein as the price of redemption, and the right of any holder of such preferred stock to dividends upon the shares represented by any certificate shall cease in the proportion fixed in the notice as the proportion to be redeemed, on the day fixed for such redemption. In every case of such partial redemption, each certificate for the stock so redeemed shall be surrendered, and a new certificate issued for the number of shares represented by such certificate and remaining unredeemed, or the old certificate may be properly stamped and returned to the holder. In case of the surrender of the certificate, the corporation may issue scrip representing fractional portions of the unredeemed shares. Said scrip shall not entitle the holder thereof to receive dividends thereon while the same is outstanding, but such scrip may at any time be exchanged for certificates of stock when presented in amounts rep-

representing an even share or shares of stock, and upon such exchange, the holder of such scrip upon surrendering the same shall be entitled to be paid any dividends theretofore declared and remaining unpaid upon the stock represented thereby.

No preferred stock represented by a certificate bearing date prior to the date fixed for the redemption of the whole or a part of the preferred stock shall, after the date so fixed for such redemption, be transferred upon the books of the corporation unless and until such certificate shall have been surrendered or stamped by the corporation as the case may require.

In the event of the liquidation, dissolution or winding up (whether voluntary or involuntary) of the corporation, the assets and funds of the corporation, after payment of the corporation's indebtedness, shall be applied in the order mentioned as follows:

First, to the payment to the holders of the preferred stock of the full amount of the par value of their preferred shares together with the amount of any deficit in dividends thereon calculated at the rate of five percent per annum from the date of original issuance thereof; then to the payment to the holders of the common stock of the full amount of the par value of their common shares together with the amount of any deficit in dividends thereon calculated at the rate of five percent per annum from and after November 30, 1917, or from and after the date of original issuance thereof in the case of common stock issued subsequent to November 30, 1917; and lastly, the remaining assets and funds shall be distributed among and paid to the holders of the preferred and common stock pro rata share and share alike, and without preference or priority of one class of shares over the other.

Each stockholder shall be entitled to one vote for each share of stock held by him, whether preferred or common stock.

and do hereby call a meeting of the stockholders to be held at the office of the Company, corner Tully Road and Lakeside Avenue, in the Town of West Orange, County of Essex and State of New Jersey, on the second day of July, 1924, at 1:30 p.m., to take action upon the above resolution."

Certificate of Change

Edison Storage Battery Company, a corporation of New Jersey,

doth hereby certify that it has amended Article Fourth of the Certificate of Incorporation of the Company as heretofore amended to read as follows:

"FOURTH: The total authorized capital stock of the corporation is Five Million Dollars (\$5,000,000) divided into fifty thousand (50,000) shares of the par value of One Hundred Dollars (\$100) each. Of such total authorized capital stock, twenty thousand (20,000) shares amounting to Two Million Dollars (\$2,000,000) shall be preferred stock, and thirty thousand (30,000) shares amounting to Three Million Dollars (\$3,000,000) shall be common stock.

"The holders of the preferred stock shall be entitled to receive when and as declared from the surplus or net profits of the corporation dividends at the rate of five percent per annum yearly, half-yearly or quarterly, as the Board of Directors

may from time to time fix and determine. The dividends on the preferred stock shall be cumulative from the date of original issuance thereof. No dividends shall be paid on or set apart for any common stock at any time unless and until the holders of the preferred stock shall have received full dividends thereon at the rate of five percent per annum for all previous dividend periods or payment thereof provided for by funds set apart for such purposes.

"After full cumulative dividends at the rate of five percent per annum on the preferred stock for all previous dividend periods shall have been declared and paid or payment provided for by funds set apart for the purpose, the holders of the common stock shall be entitled to receive when and as declared out of the remaining surplus or net profits, dividends at the rate of five percent per annum for all previous dividend periods quarterly as the Board of Directors may from time to time fix and determine.

"After full dividends as aforesaid on the common stock for all previous dividend periods from and after November 30, 1917, or from and after the date of original issuance thereof in the case of common stock issued subsequent to November 30, 1917, and on the preferred stock from the date of the original issuance thereof, shall have been declared and paid or payment provided for by funds set apart for that purpose, the remainder of any surplus or net profits shall be applicable to the payment of further dividends equally per share upon both preferred and common stock, which said further dividends shall not be at a rate in excess of three percent per annum on the preferred stock calculated cumulatively from the date of the original issuance thereof.

"After dividends as hereinbefore provided for on the preferred and common stock shall have been declared and paid or payment provided for by funds set apart for the purpose to an amount not to exceed the rate of eight percent per annum, as aforesaid, the remainder of any surplus or net profits shall then be applicable to the payment of further dividends upon the common stock.

"In determining the distribution of dividends between the preferred and common stock, there shall be excluded from calculation all dividends paid or payable upon the common stock in excess of the aggregate dividends at the rate of eight percent per annum to which said stock may be entitled as hereinbefore provided.

"The preferred stock shall be subject to redemption, in whole or in part, at the option of the corporation (to be determined by the Board of Directors), at any time after three years from the original issuance thereof at one hundred and five percent (105%) of the par value thereof, together with all dividends declared thereon and remaining unpaid, provided, however, that no such preferred stock shall be so redeemed until full cumulative dividends at the rate of five percent per annum up to the date of such redemption on all outstanding preferred stock shall have been paid or funds set apart for this purpose.

"In case the Board of Directors of the corporation shall determine to redeem the whole of the preferred stock, it shall cause to be mailed to each holder of the preferred stock at his address registered upon the books of the corporation, at least five days before the date of such proposed redemption, a notice stating the price and place at which and the time when said preferred stock is to be redeemed. On and after the date fixed for the redemption in such notice, the corporation shall, upon presentation, duly endorsed for transfer and surrender, of the certificate of said preferred stock, pay to the holder the sum of the price so fixed for the redemption of such stock and the dividends thereon.

and the Board of Directors of the corporation shall have the right to redeem the preferred stock at any time after the date of the original issue thereof, and the holders of the preferred stock shall have no right to demand redemption of the same until the date of the original issue thereof, and the Board of Directors of the corporation shall have the right to redeem the preferred stock at any time after the date of the original issue thereof, and the holders of the preferred stock shall have no right to demand redemption of the same until the date of the original issue thereof.

-5-

the holder thereof the price fixed herein as the price of redemption, and the right to dividends upon any preferred stock shall cease, on the date fixed by such notice for redemption.

"In case the Board of Directors of the corporation shall determine to redeem a part of the preferred stock, in every such case the shares of such preferred stock represented by each certificate thereof as such certificates shall be outstanding at the beginning of business on the day fixed by the directors for such redemption, shall be redeemed proportionately. Notice of such partial redemption, stating the proportion to be redeemed, the price and place at which, and the time when such preferred stock is to be redeemed, shall be mailed to each holder of the preferred stock at his address registered upon the books of the corporation, at least five days before the date of such proposed partial redemption. On and after the date fixed in the notice for such partial redemption, the corporation, upon presentation duly endorsed for transfer and surrender, or presentation for stamping (as the corporation may require) of any certificate for such preferred stock, shall pay to the holder thereof for such share redeemed the price fixed herein as the price of redemption, and the right of any holder of such preferred stock to dividends upon the shares represented by any certificate shall cease, in the proportion fixed in the notice as the proportion to be redeemed, on the day fixed for such redemption. In every case of such partial redemption, each certificate for the stock so redeemed shall be surrendered, and a new certificate issued for the number of shares represented by such certificate and remaining unredeemed, or the old certificate may be properly stamped and returned to the holder. In case of the surrender of the certificate, the corporation may issue scrip representing fractional portions of the unredeemed shares. Said scrip shall not entitle the holder thereof to receive dividends thereon while the same is outstanding; but such scrip may at any time be exchanged for certificates of stock when presented in amounts representing an even share or shares of stock, and upon such exchange, the holder of such scrip upon surrendering the same shall be entitled to be paid any dividends thereon declared and remaining unpaid upon the stock represented thereby.

"No preferred stock represented by a certificate bearing date prior to the date fixed for the redemption of the whole or a part of the preferred stock shall, after the date so fixed for such redemption, be transferred upon the books of the corporation unless and until such certificate shall have been surrendered or stamped by the corporation as the case may require.

"In the event of the liquidation, dissolution or winding up (whether voluntary or involuntary) of the corporation, the assets and funds of the corporation, after payment of the corporation's indebtedness, shall be applied in the order mentioned as follows:-

"First, to the payment to the holders of the preferred stock of the full amount of the par value of their preferred shares together with the amount of any deficit in dividends thereon calculated at the rate of five percent per annum from the date of original issuance thereof; then to the payment to the holders of the common stock of the full amount of the par value of their common shares together with the amount of any deficit in dividends thereon calculated at the rate of five percent per annum from and after November 30, 1917, or from and after the date of original issuance thereof in the case of common stock issued subsequent to November 30, 1917; and lastly, the remaining assets and funds shall be distributed among and paid to the holders of the preferred and common stock pro rata share and share alike, and without preference or priority of one class of shares over the other.

said amendment having been duly declared by resolution of said Board of Directors of said Company (above recited) to be advisable, and having been duly and regularly assented to by the vote of two-thirds in interest of each class of the stockholders having voting powers, at a meeting duly called by the Board of Directors for that purpose, and the written assent of said stockholders as hereto appended.

EDISON STORAGE BATTERY COMPANY

Thos A Edison
President.

J. H. Robinson
Secretary.

STOCKHOLDERS' AGREEMENT TO CHANGE

We, the subscribers, being at least two-thirds in interest of each class of the stockholders of Edison Storage Battery Company, having voting powers, having, at a meeting regularly called for the purpose, voted in favor of amending Article Fourth of the Certificate of Incorporation of the Company, as heretofore amended, to read as follows:

"FOURTH: The total authorized capital stock of the corporation is Five Million Dollars (\$5,000,000) divided into fifty thousand (50,000) shares of the par value of One Hundred Dollars (\$100) each. Of such total authorized capital stock, twenty thousand (20,000) shares amounting to Two Million Dollars (\$2,000,000) shall be preferred stock, and thirty thousand (30,000) shares amounting to Three Million Dollars (\$3,000,000) shall be common stock.

"The holders of the preferred stock shall be entitled to receive when and as declared from the surplus or net profits of the corporation dividends at the rate of five percent per annum, yearly, half-yearly or quarterly, as the Board of Directors may from time to time fix and determine. The dividends on the preferred stock shall be cumulative from the date of original issuance thereof. No dividends shall be paid on or set apart for any common stock at any time unless and until the holders of the preferred stock shall have received full dividends thereon at the rate of five percent per annum for all previous dividend periods or payment thereof provided for by funds set apart for such purpose.

"After full cumulative dividends at the rate of five percent per annum on the preferred stock for all previous dividend periods shall have been declared and paid or payment provided for by funds set apart for the purpose, the holders of the common stock shall be entitled to receive when and as declared out of the remaining surplus or net profits, dividends at the rate of five percent per annum, payable yearly, half-yearly or quarterly as the Board of Directors may from time to time fix and determine.

"After full dividends as aforesaid on the common stock for all previous dividend periods from and after November 30, 1917, or from and after the date of original issuance thereof in the case of common stock issued subsequent to November 30, 1917, and on the preferred stock from the date of the original issuance thereof, shall have been declared and paid or payment provided for by funds set apart for that purpose, the remainder of any surplus or net profits shall be applicable to the payment of further dividends equally per share upon both preferred and common stock, which said further dividends shall not be at a rate in excess of three percent per annum on the preferred stock calculated cumulatively from the date of the original issuance thereof.

"After dividends as heretofore provided for on the preferred and common stock shall have been declared and paid or payment provided for by funds set apart for the purpose to the amount not to exceed the rate of eight percent per annum, as aforesaid, the remainder of any surplus or net profits shall then be applicable to the payment of further dividends upon the common stock.

THE BOARD OF DIRECTORS OF THE CORPORATION SHALL HAVE THE RIGHT TO REDEEM THE PREFERRED STOCK, IN WHOLE OR IN PART, AT THE OPTION OF THE CORPORATION (TO BE DETERMINED BY THE BOARD OF DIRECTORS), AT ANY TIME AFTER THREE YEARS FROM THE ORIGINAL ISSUANCE THEREOF AT ONE HUNDRED AND FIVE PERCENT (105%) OF THE PAR VALUE THEREOF, TOGETHER WITH ALL DIVIDENDS DECLARED THEREON AND REMAINING UNPAID, PROVIDED, HOWEVER, THAT NO SUCH PREFERRED STOCK SHALL BE SO REDEEMED UNTIL FULL CUMULATIVE DIVIDENDS AT THE RATE OF FIVE PERCENT PER ANNUM UP TO THE DATE OF SUCH REDEMPTION ON ALL OUTSTANDING PREFERRED STOCK SHALL HAVE BEEN PAID OR FUNDS SET APART FOR THIS PURPOSE.

"In case the Board of Directors of the corporation shall determine to redeem the whole of the preferred stock, they shall cause to be mailed to each holder of the preferred stock at his address registered upon the books of the corporation, at least five days before the date of such proposed redemption, a notice stating the price and place at which and the time when said preferred stock is to be redeemed. On and after the date fixed for the redemption in such notice, the corporation shall, upon presentation, duly endorsed for transfer and surrender, of the certificate of said preferred stock, pay to the holder thereof, the price fixed herein as the price of redemption, and the right to dividends upon any preferred stock shall cease on the date fixed by such notice for redemption.

"In case the Board of Directors of the corporation shall determine to redeem a part of the preferred stock, in every such case the shares of such preferred stock represented by such certificate therefor as such certificates shall be outstanding at the beginning of business on the day fixed by the directors for such redemption, shall be redeemed proportionately. Notice of such partial redemption, stating the proportion to be redeemed, the price and place at which, and the time when such preferred stock is to be redeemed, shall be mailed to each holder of the preferred stock at his address registered upon the books of the corporation, at least five days before the date of such proposed partial redemption. On and after the date fixed in the notice for such partial redemption, the corporation, upon presentation duly endorsed for transfer and surrender, or presentation for stamping (as the corporation may require), of any certificate for such preferred stock, shall pay to the holder thereof for each share redeemed the price fixed herein as the price of redemption, and the right of any holder of such preferred stock to dividends upon the shares represented by any certificate shall cease, in the proportion fixed in the notice as the proportion to be redeemed on the day fixed for such redemption. In every case of such partial redemption, such certificate for the stock so redeemed shall be surrendered, and a new certificate issued for the number of shares represented by such certificate and remaining unredeemed, or the old certificate may be properly stamped and returned to the holder. In case of the surrender of the certificate, the corporation may issue scrip representing fractional portions of the unredeemed shares. Said scrip shall not entitle the holder

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whereof to receive dividends thereon while the same is outstanding; but such scrip may at any time be exchanged for certificates of stock when presented in amounts representing an even share or shares of stock, and upon such exchange, the holder of such scrip upon surrendering the same shall be entitled to be paid any dividends therefor declared and remaining unpaid upon the stock represented thereby.

"No preferred stock represented by a certificate bearing date prior to the date fixed for the redemption of the whole or a part of the preferred stock shall, after the date so fixed for such redemption, be transferred upon the books of the corporation unless and until such certificate shall have been surrendered or stamped by the corporation as the case may require.

"In the event of the liquidation, dissolution or winding up (whether voluntary or involuntary) of the corporation, the assets and funds of the corporation, after payment of the corporation's indebtedness, shall be applied in the order mentioned as follows:-

"First, to the payment to the holders of the preferred stock of the full amount of the par value of their preferred shares together with the amount of any deficit in dividends thereon calculated at the rate of five percent per annum from the date of original issuance thereof; then to the payment to the holders of the common stock of the full amount of the dividends thereon; then to the payment to the holders of the common stock of the full amount of the amount of any deficit in dividends thereon calculated at the rate of five percent per annum from and after November 30, 1917, or from and after the date of original issuance thereof in the case of common stock issued subsequent to November 30, 1917; and lastly, the remaining assets and funds shall be distributed among and paid to the holders of the preferred stock, common stock per rate share and share alike, and without preference or priority of one class of shares over the other.

"Each stockholder shall be entitled to one vote for each share of stock held by him, whether preferred or common stock."

do now, pursuant to the Statute, hereby give our written assent to said change.

WITNESS our hands this second day of July, 1924

<u>Name</u>	<u>No. of Shares of Common Stock</u>	<u>No. of Shares of Preferred Stock</u>
<u>James A. Carson</u>	<u>75</u>	<u>1</u>
<u>Charles Carson</u>	<u>1</u>	<u>1</u>
<u>Wm. Sullivan</u>	<u>1</u>	<u>1</u>
<u>James Carson</u>	<u>10</u>	<u>1</u>
<u>Frank Carson</u>	<u>1</u>	<u>1</u>
<u>William Carson</u>	<u>1</u>	<u>1</u>
<u>Thomas A. Carson (Indorproks)</u>	<u>2,961</u>	<u>20,000</u>
<u>By Wm. Sullivan, Treas.</u>		

5063

[illegible]

Total Edmund Williamson 27,460 20,000
Notary Public of New Jersey

STATE OF NEW JERSEY)
COUNTY OF ESSEX) ss.:

Be it Remembered that on this 2nd day of July, A.D. 1924, before me, the subscriber, a Notary Public of the State of New Jersey, personally appeared John W. Robinson, Secretary of Edison Storage Battery Company, the corporation mentioned in and which executed the foregoing certificate, who, being by me duly sworn on his oath, says he is such Secretary; that the seal affixed to said certificate is the corporate seal of said corporation, the same being well known to him; that Thomas A. Edison is President of said corporation and signed said certificate and affixed said seal thereto, and delivered said certificate by authority of the Board of Directors and with the assent of at least two-thirds in interest of each class of the stockholders of said corporation having voting powers, as and for his voluntary act and deed and the voluntary act and deed of the said corporation, in the presence of deponent who thereupon subscribed his name thereto as witness.

And he further says that the resolution of the Board of Directors contained in said certificate is truly and correctly set forth therein and that said resolution was adopted at a meeting of the said Board of Directors duly convened and held on the 26th day of June, 1924.

And he further says that the assent hereto appended is signed by at least two-thirds in interest of each class of stockholders of said corporation having voting powers, either in person or by their several duly constituted attorneys-in-fact thereunto duly authorized in writing.

Subscribed and sworn to before me the day and year aforesaid.

Edmund Williams

Notary Public of New Jersey

COPIES OF
SERIALS ON

ENDORSED:

ENDORSED;
"FILED AND RECORDED Jul 3 1924
THOMAS F. MARTIN,
Secretary of State."

CERTIFICATE OF AMENDMENT

of

CERTIFICATE OF INCORPORATION

of

EDISON STORAGE BATTERY COMPANY

**Edison Storage Battery Company Records
Letterbook (1904-1916)**

This letterbook covers the period June 1904-November 1916. Many of the early letters are by Walter S. Mallory, vice president of ESBCo. Many of the later letters are by Harry F. Miller, who served as secretary and then as treasurer of the company. Other correspondents include Edison and George A. Meister. Included is correspondence regarding the financial health and administration of the company and relations with its British sales agents. Also included are letters delaying the payment of accounts, announcing board meetings, and arranging for the purchase of insurance and supplies. In addition, there is a series of letters prepared by Miller on Edison's behalf to investor Arthur I. Clymer of Ohio. A tag tied into the binding is marked "Edison S. B. Co. Duplicate Letter Book June 1904 to Nov 1916." The book contains 992 numbered pages and an index; it has been used to page 682. Several letters have been pasted into the book.

The book is badly water damaged, and many letters are illegible in part or in whole. Every effort has been made to locate fully legible documents elsewhere in the ESBCo record group that duplicate the information in this letterbook. Less than 10 percent of the documents in the book have been selected. The index has also been selected to provide information that may otherwise be inaccessible.

Additional letterbooks containing items pertaining to the development of Edison's storage battery can be found in the National Phonograph Company Records and the Edison Ore Milling Syndicate Records (Company Records Series).

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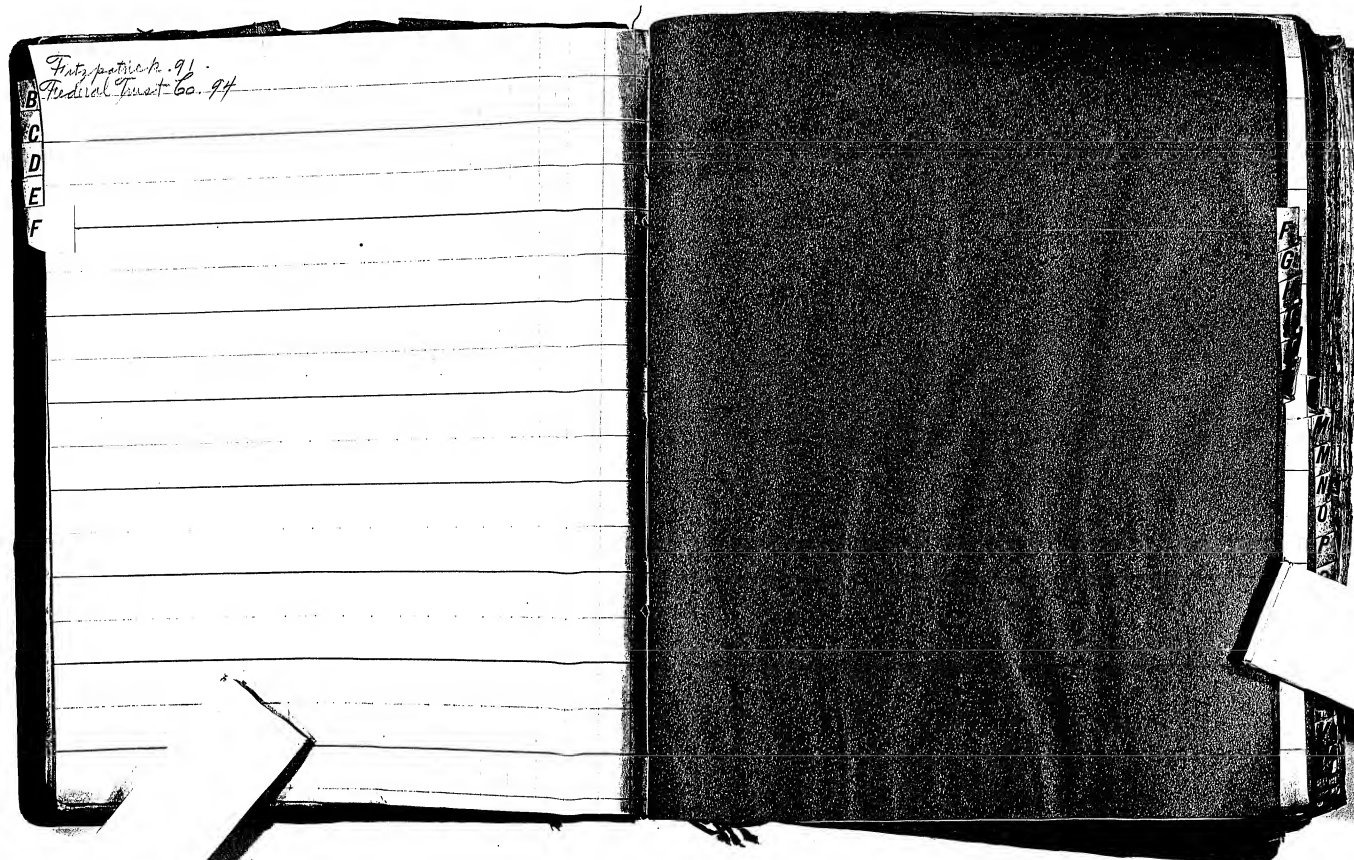
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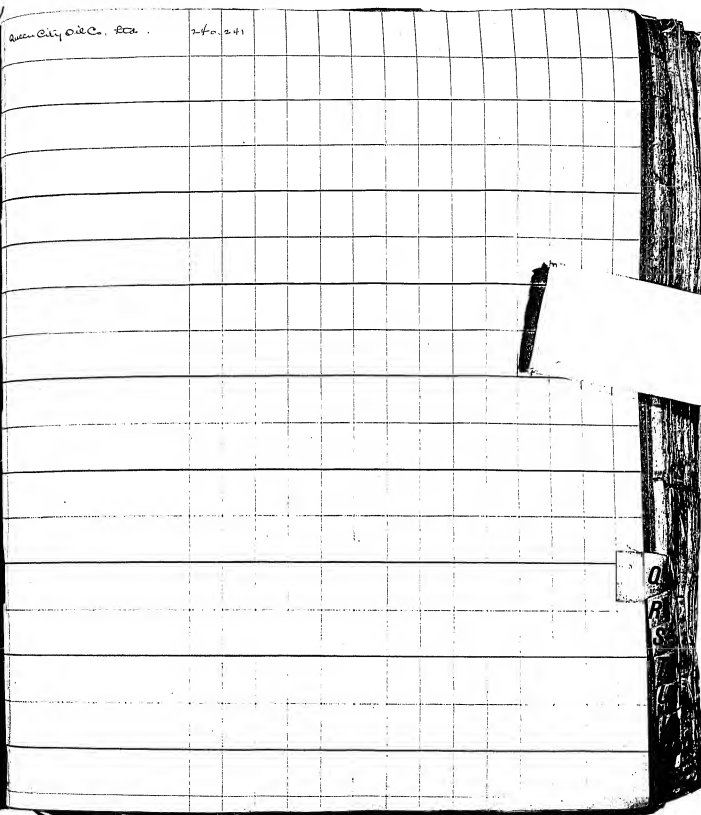
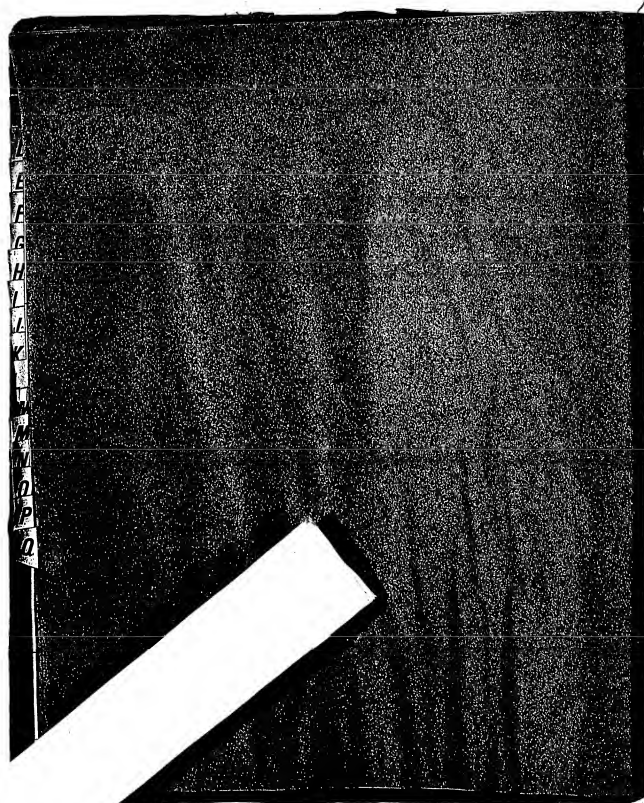
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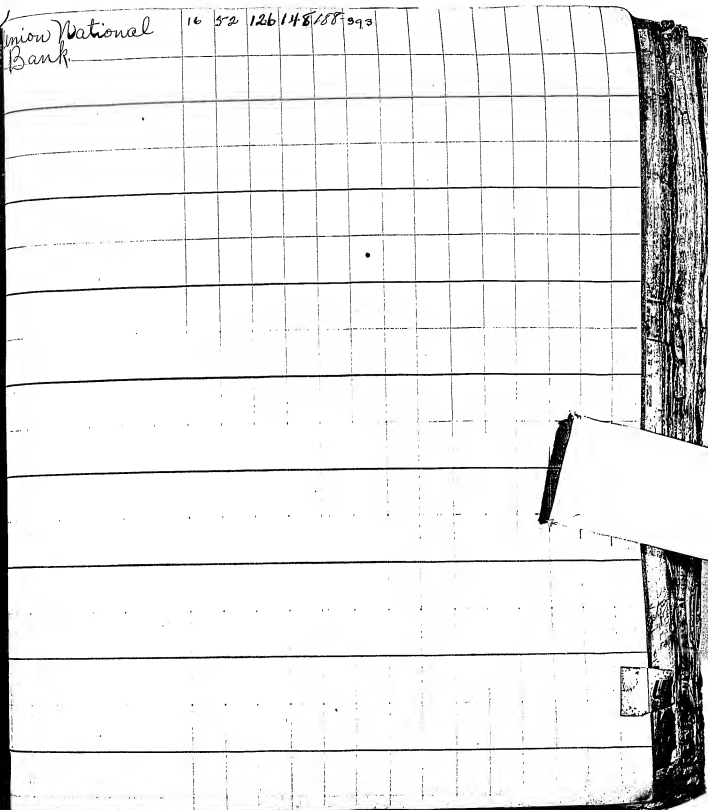
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Feb. 1/05

Mr. V. Karapetoff,
Cornell University,
Ithaca, N. Y.

Dear Sir:--

Replying to yours of the 13th ult., which has been delayed owing to Mr. Edison's illness, beg to state that the storage battery is undergoing certain mechanical changes at present, and we would prefer not to send cells at this time, as we believe the new type of cell will be very much better in every respect than those which we have been manufacturing.

Very truly yours,
J. P. Watson

V.P.

Feb. 4/05.

S. Bergmann, Esq.,

Berlin, Germany

Dear Sir:

Some days ago we received your cablegram which was as follows: "Would you consider rubber cans somewhat flexible if cost ninety cents including cover", and we have been compelled to hold it, as Mr. Wilson was not in condition to be sent.

We have, however, seen him to-day and he states as follows: "Rubber cans no good, new welded cans now perfectly

We are considering the welded cans and got from 25
 the price of the material in stock and so on. Thank you
 for the information, and we will be glad to hear from you again.

Feb. 9/05

Weston Electric Instrument Company,
Newark, N.J.

Gentlemen:--

Replying to yours of the 31st ult. which has been forwarded to us from our Glen Ridge Plant, beg to state that we have had the matter looked into and find that all our measuring instruments have been made by your company, with the exception of one, which came to us on a Waverley automobile.

Mr. Wilson says that we will discontinue its use, and that you are to be free of charge to us.

V.P.

✓
April 8 1905.

Ingersoll-Sargeant Drill Co.,
26 Cortland Street,
New York City.

Gentlemen:--

Replying to yours of the 7th, relative to the 8 and
8 x 8 Class "F" Compressor No. 1123 and 36 x 36 Air Receiver, beg
to state that it is Mr. Edison's intention to resume the experi-
mental work on the air heater as soon as he gets through with
the storage battery work. Just when this will be we cannot say
at this writing, as we have the installation ready for
this work, and will have it ready as soon as possible, and will
when it is ready, be glad to have you call on it.
We are very glad to hear that you are doing well with the
storage battery work.

[MISDATED BY AUTHOR: CORRECT DATE IS MAY 26, 1905]

222

May 26th, 1904

Col. George M. Studebaker,
South Bend, Indiana.

Dear Mr. Studebaker:

Your letter of the 16th inst. received,
and I am gratified to hear you express your confidence in
the future of my battery, and I in turn feel sure that its
adoption by your Company will be to our mutual advantage.

I have found it necessary, in order to attain the
best results, to increase the dimensions of the various cells
and enclose herewith two small sketches giving the dimensions
of the proposed new tray, designed to take the place of the
E-10 and E-27 trays.

The proposed voltage of the new cell will be 1.2 volts
which you will note is practically the same as before.

At present, it is impossible to definitely just
ify the present manufacture of the cell with the exception,
but I believe that you can furnish me with the new cells you
will require for fully spring testing, and without having any
further delay, as I shall be only too glad to have them.

Col. George M. Studebaker - 2.

batteries at that time in order to hold the Spring trade.

Trusting that the above will give you the information
that you desire, I am, with kindest regards -

Yours very truly,

Wm. O. Benson

Aug. 7, 1905.

215
224

Chicago, Ill.
Dear Sir:
In answer to your letter of the 6th inst. regarding the
magneto for the race of the 1st of August, I have
the pleasure to inform you that the same will be 1.2 volt
battery and operate John J. Ott on
the 1st of August at 11:30 A.M.
Very truly yours,
Wm. O. Benson

147

January 31, 1906.

Gold Car Heating & Lighting Co.,
17 Battery Place,
New York, N.Y.

Gentlemen:-

Your favor of the 2nd ult. was duly received in reference to the termination on November 20th, 1905, of the agreement between your company and the Edison Storage Battery Company, which provided for exclusive handling by you of the Edison batteries for train lighting on steam railroads in the United States. The Edison Storage Battery Company will, of course, be glad at all times to recognize that part of the agreement which you call attention, namely, that it "will continue to sell the batteries to the Gold Car Heating & Lighting Company for a period of five years thereafter, (November 20th, 1910) at a price as low as

any other battery to any one firm in the

United States.

Very respectfully,
J. H. Edison

Feb. 14, 1906.

The Edison Storage Battery Company agrees to sell the Adams Express Company fifty (50) sets of batteries, size E 18, sixty-two (62) cells each. Price ten (\$10) dollars per cell f.o.b. Glen Ridge, N. J. Delivery in seventy-five (75) days from date of order. Batteries to be shipped and paid for as fast as completed.

The Edison Storage Battery Company guarantees the mechanical construction of these batteries for one year, and at the end of the first year, will replace the positive plates for free, and will agree to reimburse that part of the cost of the plates. The Edison Storage Battery Company will also agree to sell the Edison Gold Car for a period of five years.

THOMAS A. EDISON
PresidentFRANK L. DYER
Vice-President and General CounselE. G. DODGE
General ManagerH. F. MILLER
Secretary-Treasurer

EDISON STORAGE BATTERY CO.

Telephone, 908 Orange

ORANGE, NEW JERSEY

September 22, 1910.

H. E. Dick, Esq.

415 West Jackson Boulevard
Chicago, Ill.

The Board of Directors of the Edison Storage Battery Company, a corporation of New Jersey, on the 16th day of September, 1910, do hereby resolve and declare that it is advisable that the capital stock of said company be increased from \$1,000,000 to \$3,000,000, said additional stock to be like in all respects the present stock of said company. And we hereby call a meeting of the stockholders to be held at the company's office, corner of Valley Road and Lakeside Avenue, West Orange, N. J., on Tuesday, the 4th day of October, 1910, at eleven o'clock A. M., to take action upon the above resolution.

Attest

H. F. Miller

Secretary.

- 2 -

We have at the present time between 9,000 and 10,000 cells on order.

The Company was incorporated May 29th 1901. The capital authorized being \$1,000,000.00 all of which was issued. \$1,000,000.00 was given to Mr. Edison for his patents, those existing and all future patents. \$500,000.00 in bonds were issued to provide money and Mr. Edison gave \$250,000.00 of his stock to the subscribers of the bonds as an inducement. The capitalization was increased this fall by \$2,500,000.00 making a total capitalization of \$3,500,000.00. About \$2,000,000.00 of the additional \$2,500,000.00 was issued to Mr. Edison for money advanced the Company, and he took the stock at par. The remainder, viz - \$500,000.00 remains in the Treasury subject to the discretion of the stockholders.

- 3 -

You are undoubtedly aware of the unlimited field for a light reliable storage battery, such as we have and we therefore think you will agree with us that the future looks exceedingly promising.

Yours very truly,

H. S. Kelley
Treasurer.

A. I. Clymer, Esq.,
Van Wert, Ohio.

Dear Sir:

Replying to your letter of the 10th instant would say that when Mr. Edison started his experiments to perfect the battery he borrowed \$500,000. and gave a Bond and Mortgage for the money on the Company, which he organized with one million dollars capital. The whole of the million was issued to Mr. Edison for the purpose of making the battery. The report of the Patent Office of the UNITED STATES is that the Edison battery is a valuable invention.

1. The first step in the process of the investigation is the identification of the problem. This is done by the investigator who is responsible for the investigation. The investigator must identify the problem and the scope of the investigation. The investigator must also identify the objectives of the investigation. The objectives of the investigation are the goals that the investigator wants to achieve. The objectives of the investigation are the goals that the investigator wants to achieve.

been in the hands of the public one and one-half years Mr. Edison decided that they were not sufficiently perfect to achieve what he started to achieve, to wit: production of a perfect storage battery to displace horses in cities.

He then closed his works and started again, and after three years produced the present battery, which he knows will be successful; and also devised and produced a large variety of special machines and processes, every dollar of the cost of which was loaned the Company by Mr. Edison.

After the works had been running one year,
a meeting of the Stock-holders was called. The report
of the ~~the~~ ^{Chief} accountant, Lybrand, Ross ^{and} the
~~works~~ ^{managers} of Newburg and New York were presented
to the meeting and found to be satisfactory.

The following are the names of the stockholders:
J. B. Lybrand, J. B. Ross, J. B. Lybrand, J. B. Ross,
J. B. Lybrand, J. B. Ross, J. B. Lybrand, J. B. Ross,
J. B. Lybrand, J. B. Ross, J. B. Lybrand, J. B. Ross,
J. B. Lybrand, J. B. Ross, J. B. Lybrand, J. B. Ross,
J. B. Lybrand, J. B. Ross, J. B. Lybrand, J. B. Ross,

- 3 -

works will be exceedingly profitable and that in addition to dividends, the experimental account will be wiped out.

The interest on the Bonds is six per-cent and they mature in 1917.

Also all future inventions in storage batteries made by Mr. Edison are the property of the Company.

Yours very truly,

John H. ...
Treasurer.

NY 102

424
 426

May 1st 1911.

A. I. Glymer, Esq.,
 Van Wert, Ohio.

Dear Sir:-

Yours of the 25th ultimo received.

You are right about the Exide owning stock in
 electric vehicle concerns. There are two that I

know of, one of which is the Woods Co. of

Ohio. The other is the Exide Co. of

Ohio. The Exide Co. is the one that

owns the stock in the Woods Co. of

Ohio. The Woods Co. is the one that

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owns the stock in the Exide Co. of

Ohio. The Exide Co. is the one that

426
440

June 13th 1911.

A. I. Clymer, Esq.,
Van Wert, Ohio.

Dear Sir:-

Replying to your letter of the 5th instant Mr. Edison directs me to write you that the reporters got things mixed. We are developing a type of battery with smaller tubes for use in portable power sources which require smaller cells and can be charged at high rate of rate of discharge and make delivery of the load.

This type of vehicle for use of butchers, greasers etc., and which can be sold for about \$700.00. It will require several months to get machinery to make this type.

Yours very truly,

Secretary-Treasurer.

560
583

June 3, 1913.

A. E. Clymer, Esq.,
West, Ohio.

Dear Mr. Clymer:-

Your letter of the 28th ultimo received.

The new buildings are three-quarters finished. We are manufacturing about one thousand cells daily.

We are furnishing some batteries for headlights; the General Electric Company are experim. along this line.

Bench is doing a good business steadily increasing.

making \$30,000 to \$35,000

Sincerely,
E

First

August 19, 1913

Mr. Paul H. Cromelin,
Thomas A. Edison, Ltd.,
25 Clerkenwell Road,
London, E. C., England.

Dear Mr. Cromelin:-

This is to notify you that I hereby terminate the
arrangement heretofore had with you and set forth in a letter
dated November 9, 1911 to you and signed by Mr. Dyer, whereby
we to receive certain sums on calls of Edison Storage
Co. by Mr. J. F. Monnet in England and France.

Very truly,

Edison

January 28, 1914.

Messrs. J. Stone & Co. Ltd.,
Deptford, England.

Gentlemen:

In my letter of October 9, 1913 to your Mr. W. R. Preston, I submitted a proposition to enter into a contract with you relating to my alkaline storage cells for car lighting on railways, which proposition was to be held open for ninety days from the date of said letter. This proposition has not been accepted by you and the time for such acceptance has expired.

As a result of negotiations with your representatives, however, I am submitting to you duplicate copies of a proposition for the supply of 1000 cells for the Battery Company and for the supply of 1000 cells for the Railway Company. If these proposals are not accepted by you, I will still deliver to you the cells as ordered and the same will be delivered to you as soon as the same are ready for delivery.

Yours faithfully,
J. Stone & Co. Ltd.

June 3, 1914

Messrs. J. Stone & Company, Limited,
-SPRINGFIELD, -

Gentlemen:-

As the result of numerous negotiations with your representative, Mr. Walker, I submit to you three like copies of a proposed agreement between you, Edison Storage Battery Company and myself, and will hold open for your acceptance the proposition contained therein until July 10, 1914. If this proposed agreement is satisfactory to you and you will deliver to me on or before July 10, 1914 the said copies executed in due form on behalf of your company, I will have the same executed on behalf of Edison Storage Battery Company. All else and more hereby, as between the

Edison Storage Battery Company and myself, is hereby accepted and agreed to by me, J. Stone & Company, Limited, on the 3rd day of June, 1914.

Yours faithfully,
J. Stone & Company, Limited

October 14, 1914.

A. I. Clymer, Esq.,

Van Wert, Ohio.

My dear Mr. Clymer:

Replying to your letter of the 9th instant I beg to enclose a copy of our last balance sheet dated June 30th 1914. The deficit shown thereon is accounted for by the fact that we wrote off a large portion of our Patent and Experimental accounts.

As to the use of auto trucks by the foreign nations at war, they consist entirely of gas propelled vehicles.

Answering your inquiry "Is there a considerable demand for the Edison battery for submarines". I would say no; but we have cells on test at the Brooklyn Navy Yard and hope to get some good orders. Mr. Ford is still experimenting on the low priced electric car.

Electric and other truck business shrunk 50% until last week when many orders for gas trucks were received from abroad. We are running about 50% of capacity.

Yours very truly

Franklin

March 15, 1915

F. J. Lissman & Company,
50 Broad Street,
New York, N. Y.

Gentlemen:-

We are willing to make the following modification of
your contract with us dated January 10, 1914:-

(a) The term of the contract shall be considered as
beginning March 1, 1915 instead of January 1, 1914. The ex-
-The original period of the contract will there-
-The minimum purchase of 4-10 calls or their

(2)

During the six months ending February 28, 1918	8250 A-10 cells
During the six months ending August 31, 1918	13750 A-10 cells
During the six months ending February 28, 1919	13750 A-10 cells
During the six months ending August 31, 1919	19250 A-10 cells
During the six months ending February 28, 1920	19250 A-10 cells
During the six months ending August 31, 1920	27500 A-10 cells
During the six months ending February 28, 1921	27500 A-10 cells
During the six months ending August 31, 1921	35750 A-10 cells
During the six months ending February 28, 1922	35750

(3)

During the six months ending
August 31, 1924

35760 A-10 cells

During the six months ending
February 28, 1925

35760 A-10 cells

This modification of the contract is by mutual request and agreement, and any and all defaults in the matter of purchases required under the contract prior to February 28th, 1916 and any damages arising therefrom are hereby excused and remitted.

We are sending you this letter in duplicate. Will
kindly return one copy to us with your acceptance noted.

Very truly yours,

ALCOH STORAGE BATTERY

By *[Signature]*

President

December 7, 1915.

A. I. Clymer, Esq.,
Van Wert, Ohio.

My dear Mr. Clymer:

Yours of the 4th instant received.

Enclosed find copy of Annual balance sheet as requested. As to the reason the battery is not used in pleasure vehicles, we have found it is due to the manufacturers putting in the cheapest lead battery that they can get: thus reducing the gross price of their vehicle and obtaining the most profit out of their product.

They care nothing about the merits of a battery, neither do they care about the trouble the public will have. All they seem to want is the money.

The same reason applies to ignition and starting batteries. Garages will not sell our battery because they lose renewal sales at a high profit if they do. In this case the public is outrageously swindled.

However, we are now increasing our sales in every direction where merit counts, such as dock and industrial trucks, in which everything is Edison: regular trucks, mine locomotives, mining lamps, wireless plants on steamers, railroad car lighting etc. etc.

Yours Very truly,

Treasurer.

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END

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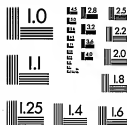
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